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THE TRADITIONS OF CHINESE NEOLITHIC POTTERY

by

Louisa G. Fitzgerald Huber

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INTRODUCTION*

The advent of neolithic painted pottery in China marks the beginning of a chiefly non-representational art that was to flourish for more than a millennium, until it was replaced by the tradition of unpainted Lung-shan wares; and it was practiced throughout a geographical area possibly more extensive than the art of the bronze vessel. For all that, among the styles that had been made known through chance finds and excavations from the time of J. G. Andersson's discovery of the Chinese Neolithic in the 1920s¹⁾ and up to the 1950s — Pan-shan, Ma-chia-yao, Ma-ch'ang, Hsin-tien, fragments of Honan ware and the like — perhaps only the first two were of sufficient aesthetic interest to merit the art historian's serious consideration. Moreover, Ma-chia-yao, because its stylistic history has never been investigated even in a preliminary manner,²⁾ has always seemed like some brief and puzzling moment of artistic excellence.

With the publication in 1959 of the vessels excavated at Miao-ti-kou in Honan³⁾ and the ever-increasing numbers of sites which have begun to manifest the scope and superiority of this style, the standards by which Chinese neolithic pottery is to be measured have been altered radically. An elucidation of the long development of the Ma-chia-yao tradition and of its intimate connection with Miao-ti-kou reveals that these two styles constitute the mainstream and full glory of the neolithic pottery. Once this view is established, all other styles, save the Lung-shan wares that signal the second phase of the Neolithic, tend to be recognized either as precursors or as peripheral.

There are some scholars, nevertheless, who have insisted upon reading the designs painted on the Yang-shao vessels as specific representational images, or who have sought to give them symbolic interpretations.⁴⁾ However, no convincing demonstrations of the supposed meanings of the designs have been forthcoming, and it is with the proponents of such an approach that the burden of proof must ultimately lie. More fundamental and disheartening is the rather dated point of view, adhered to consciously or unconsciously in varying degrees by many, that abstract designs cannot be recognized as sufficient unto themselves.

There is no doubt but that at specific moments in the evolution of the various neolithic pottery traditions, representational images are present. Anthropomorphic designs are met with periodically in Pan-shan, Ma-chia-yao and Pan-p'o, while such creatures as turtles and frogs are featured at times both at Ma-chia-yao and Pan-p'o, and upon exceedingly rare occasions a bird figures as part of a Miao-ti-kou design. These motifs, more likely than not, had totemic or other meanings. Yet, with the exception of Pan-p'o, where fish play a major role, such representational images are of no intrinsic importance to the painted pottery styles, which could as well have done without them.

The designs with which the neolithic artists were most deeply concerned are entirely geometric in nature, and in that sense abstract. The spiral, the single most important geometric design, dominating the entire history of the painted ware, may indeed have been originally suggested by observations of natural phenomena, but it is never any particular phenomenon that is the subject matter of these spiral designs. It is to the contrary the far more profound and compelling wonder of the symmetry of moving forms that is their exclusive subject matter and their meaning.

If the designs are altogether unhampered by cryptic or iconographic intent, they are not thereby to be misconstrued as idle-mindedly decorative. Their subject matter is no paltry thing, and this subject matter — or rather, more simply, the fascination of the spiral configurations themselves — was sustained through a millennium of artistic activity of the highest caliber. With the passage of time, the significance of the spiral designs was, through the inner workings of its own evolution, obscured and finally lost; but until the Bronze Age, no other visual forms were evidently ever found to be so artistically convincing that they were permitted to replace the spiraling patterns.

To the work of Swedish scholars, such as J. Gunnar Andersson and Nils Palmgren, and to many Chinese scholars, of whom some, including Li Chi, G. D. Wu and Cheng Tê-k'un, have lived much of their lives outside the mainland, and to others who have remained active in China — Hsia Nai, An Chih-min, and Su Ping-ch'i being among the most prominent — as well as to the unending stream of excavations and site reports, we owe our present state of knowledge of the Chinese Neolithic. But the most indispensable study to date, and the most influential in the West, is that presented by Chang Kwang-chih in *The Archaeology of Ancient China*.⁵⁾

In his chapters devoted to the Neolithic he has concerned himself with the origins, interactions and relative chronological positions of the various pottery traditions. Above all Chang has stressed the social and cultural implications deduced from the artifacts and the sites where they were found.⁶⁾ It is hoped that the present art-historical study, concentrating upon the evolution and interaction of the various pottery traditions may to some extent counter-balance his approach. The results of such an investigation will at times be found to support and at others to differ substantially from those he sets forth, for the purpose of this study is in the nature of a chronological ordering of the traditions of neolithic pottery, answering as fully as is possible the archaeological evidence presently available.

According to the prevailing view, the neolithic pottery first came into being in Central China and thereafter spread southward, eastward and westward from this central area. This theory is subscribed to both by the mainland archaeologists and by many scholars in the West. Its most prominent advocate in the West is Chang Kwang-chih, who is responsible for formulating what he has termed the 'Nuclear

Theory.'") Basically this theory has two corollaries: (1) that the Yang-shao painted ware tradition originated in the Chung-yüan, or Central Plains, and only later reached Kansu; (2) that the Lung-shan tradition evolved directly from the Chung-yüan painted ware and in the course of time was perpetuated throughout much of the rest of China, forming what Chang calls the 'Lungshanoid horizon.'

In regard to the first corollary, Chang's thesis would seem to have gained ultimate sanction during recent years, with the resumption of the mainland archaeological periodicals and the publication of the first carbon-14 dates for neolithic material. Of these dates, those of (ZK 38) 4770 ± 135 B. C. — (ZK 127) 4290 ± 200 B. C. for the Chung-yüan Pan-p'o culture and (ZK 110) 3910 ± 125 B. C. for the Miao-ti-kou finds in the same area, as opposed to the substantially later dates for the Kansu finds, (ZK 108) 3100 ± 190 B. C. for Ma-chia-yao and (ZK 25) 2475 ± 150 B. C.⁹) for Pan-shan, accord exactly with his theory.

Yet it has for some time been my judgement that the Miao-ti-kou designs, unlike those from Pan-p'o, are predicated upon a sophisticated spiral décor, such as is known only from Ma-chia-yao. Since I believe it can be shown that Ma-chia-yao derives from an early phase of Pan-shan and that there exists substantial evidence for the intermediate stages linking these two styles, we are led ineluctably to the conclusion that at least some phases of Ma-chia-yao (as well as Pan-shan) must precede Miao-ti-kou. The lateness of the carbon-date for Ma-chia-yao need disturb us less than it might, because the material thus dated — one bowl found in the kiln from which the carbon samples were taken — can, on stylistic grounds, be assigned only to the latest stages of this tradition.

Moreover, within the last few years the proposition that Ma-chia-yao may predate Miao-ti-kou has finally received its first tentative scientific confirmation. A painted ware amphora from the collection of the Peabody Museum of Harvard University, currently on loan to the Fogg Art Museum, was submitted to the Museum of Fine Arts, Boston for thermoluminescence dating. Mr. William Young of the Museum of Fine Arts, Department of Conservation stated upon completion of the tests, at the end of March, 1974, that the amphora may confidently be placed within the range of 3900 – 3600 B. C. The piece in question (Figure 64), bearing a decoration of spirals, represents an early phase of the Ma-chia-yao style.

There is no evidence to tell us which area, the Chung-yüan or Kansu, may rightfully claim to have first produced painted pottery; we have no way of assessing how far back in time either Pan-p'o or Pan-shan reach — nor is it a matter of great consequence.⁹) But we may assert with conviction that at least some phases of Ma-chia-yao were earlier than Miao-ti-kou, and that without Ma-chia-yao, the Miao-ti-kou designs as we know them would never have come into existence. This is not to dispute the Nuclear Theory, so much as to modify it by claiming that the Chung-yüan people were in contact with, and were open to inspiration from, other traditions.

The second corollary to the Nuclear Theory, that Lung-shan developed from the Chung-yüan painted ware culture and thence spread widely across much of China, forming the so-called Lungshanoid cultures, is equally in need of qualification.

To arrive at a correct understanding of the relationship between the painted ware tradition and the Lung-shan, the first requisite is a redefinition of 'Lung-shan.' The primary misconception about Lung-shan stems from its customary designation as the 'Black Pottery Culture.' In point of fact the occurrence of black pottery is rare within the Lung-shan tradition and it was, moreover, primarily a late development within the context of that pottery style. On the other hand, 'Lung-shan' is more properly to be defined as that tradition characterized by unpainted vessels whose chief formal attribute, setting them utterly apart from those of the Yang-shao, is that they are customarily elevated from the ground, either by a circular foot or by tripod legs.

One of the chief obstacles in establishing a precise evolutionary sequence of the Lung-shan wares is that — unlike those with painted designs, where the disciplined and logical progression of designs enables us to chart with greater ease the development of the style — one is obliged to rely upon an analysis of the aspects of shape and ware.

Further, it may be asked whether the Lung-shan vessels whose aesthetic value depends exclusively upon the relative merits of their forms are fully the equal of the painted wares, for the designs painted on the Yang-shao vessels bring into play an altogether qualitatively different dimension, namely a statement in formal visual language about something apart from the vessel itself. In the case of most Yang-shao ware this statement involves a profound concern with symmetry and movement — matters which have nothing to do with vessels as such and which can in principle be transferred to other visual media. These designs are of a far higher conceptual order than any adjustments and perfections to the formal properties of the vessels themselves.

Nevertheless, in spite of the circumstance that the Lung-shan ware lacks this dimension and this would-be helpful key to its evolution, we now possess sufficient evidence of a stratigraphical nature to allow us to reconstruct step by step the development of these forms and to explain the relationship between this tradition and the Yang-shao, whereby we are able to ascertain that there was a Lung-shan culture already spread widely throughout southern China by the time the Yang-shao in the Chung-yüan reached its majority. A study of the penetration of the Yang-shao wares into the area south of the Huang-ho reveals that this expansion brought the Chung-yüan peoples into contact with an already existing and highly developed southern-based culture. This particular circumstance rules out the possibility that the Lung-shan derived from the Yang-shao and only later extended southward. The basic Lung-shan forms were eventually assimilated by

the Chung-yüan potters, but at a time when their own painted ware tradition had fallen into disrepair.

Thus we are obliged to admit that the old Two Culture Theory retains a certain validity: apparently neolithic China was composed of at least two distinct cultural systems, one in the Chung-yüan and a second in south China, and that the meeting of these two cultures had a formative effect on the Shang civilization. Nevertheless, the Nuclear Theory remains a productive and meaningful antidote to the old Two Culture Theory, in so far as the Lung-shan age in Central China apparently signifies no ascendancy or take-over by the southern and eastern based Lung-shan people, but to the contrary, a gradual adaptation of Lung-shan forms and other cultural paraphernalia into the native Chung-yüan tradition.

If the Nuclear Theory must be qualified, first by the fact that the major painting style of the Chung-yüan derived from Kansu, and secondly by the fact that the traditions of unpainted, elevated vessels derived from the south, the importance of the Nuclear Area is by no means to be denied, for it was there that the amalgamation of these disparate elements took place, and in that general geographical area that the Shang civilization began. Moreover, we may feel certain that the situation prevalent during Shang times of a powerful civilization surrounded by less advanced, some more alien and some more 'sinicized,' peripheral cultures, pertains as well to the Neolithic; for during this early period there was in the Chung-yüan an extraordinarily impressive, vast and apparently fairly unified culture, known to us primarily through its vessels, that in the context of eastern Asia must have been the China of its time.

Notes to the Introduction

* The present text of this paper stands essentially as it was in 1974, when it was first written as a doctoral dissertation. Archaeological finds from Chinese neolithic sites excavated since that time have been taken into account, and the text as well as the choice of illustrations have been altered accordingly.

The *Kansu ts'ai-t'ao*, containing much by way of new and important material, became available only after my own typescript was completed; some illustrations from this publication have been included notwithstanding, although without any extensive commentary.

For carbon-14 dates the author has relied upon those provided by Hsia Nai (*KK*, 1977/4, 217–232) which have been dendrochronologically corrected. His notes of caution concerning the applicability and validity of the radio-carbon dates should be kept in mind throughout.

Omitted are discussions of the late Kansu styles, including the well-known wares of Ma-ch'ang and Hsin-tien; pottery from the Ch'ing-hai area; and from the eastern coastal area south of Kiangsu. These lie outside the scope of the inquiry at hand.

The author gratefully acknowledges the support of the *American-Scandinavian Foundation*, which assisted this study in its early stages by a *Thord Gray Grant*, and the *China Committee* for providing funds for the publication of the illustrations to the text. I wish to express my thanks to Dr. Bo Gyllensvärd and Mrs. Brita Kjellberg of the Museum of Far Eastern Antiquities for their assistance and encouragement over a period of many years; to Dr. Jan Wirgin, who as editor, enabled this paper to be printed; to Horst Huber for this unflinching cooperation; and, finally, to Professor Max Loehr of Harvard University, from whose introduction to the arts of ancient China the present study grew.

¹⁾ J. Gunnar Andersson, *Children of the Yellow Earth: Studies in Prehistoric China* (New York, 1934); idem, "Researches into the Prehistory of the Chinese," *BMFEA*, 15 (1943).

²⁾ A number of the more important finds from Ma-chia-yao were published by Andersson, *BMFEA*, 15 (1943), 88–89, pls. 44–57, 181–185, and by Bo Sommarström, "The Site of Ma-kia-yao," *BMFEA*, 28 (1956), 55–138, pls. 1–60. Ma-chia-yao was not excavated scientifically, and hence evidence of a stratigraphic nature was not available to establish a periodization of the Ma-chia-yao wares. Neither Andersson nor Sommarström attempted a periodization on the basis of stylistic analysis.

³⁾ An Chih-min, Cheng Nai-wu and Hsieh Tuan-chü, *Miao-ti-kou yü San-li-ch'iao*, Archaeological Monographs, Series D, No. 9 (Peking, 1959).

⁴⁾ As, for instance, A. Bulling, *The Meaning of China's Most Ancient Art: An Interpretation of Pottery Patterns from Kansu (Ma Ch'ang and Pan-shan) and their Development in the Shang, Chou and Han Periods* (Leiden, 1952). Note especially her discussion on p. 6.

⁵⁾ Chang Kwang-chih, *The Archaeology of Ancient China* (New Haven, 1963); revised and enlarged editions, 1968, 1977. All references to this publication in the present text are to the 1977 edition unless otherwise indicated.

⁶⁾ Chang has formulated lucidly and in great detail his attitude toward the function of archaeological study in his *Rethinking Archaeology* (New York, 1967).

⁷⁾ The concept of the Nuclear Theory was first presented by Chang in the 1963 edition of *The Archaeology of Ancient China*, pp. 58, 59. Subsequent re-formulations of this concept appear in the 1968 edition, pp. 84–87, 89, 129 and in the 1977 edition, p. 150 f. In China, An Chih-min has been the chief spokesman for the view that both Yang-shao and Lung-shan originated in Central China; see *KK* (1959/10), 559–565.

⁸⁾ Hsia Nai, *KK* (1977/4), 229–230.

⁹⁾ The so-called '*sheng-wen*' cultural horizon, characterized by a tradition of unpainted cord-marked pottery, now believed to represent the oldest known form of Chinese neolithic wares, and by the occasional appearance of microlithic tools alongside polished stone implements, is a topic which has been excluded from the present study in so far as definitive statements about it would seem at the moment premature. But the growing importance of the topic can no longer be doubted, as the *sheng-wen* material, which is beginning gradually to accumulate, leads us back increasingly near to the origins of Chinese pottery. Sites belonging to the *sheng-wen* horizon have been located primarily in central Shensi along the Wei River, reaffirming the significance of the Nuclear Area in the development of Chinese civilization, with one site — Ta-ti-wan, Ch'ih-an-hsien — recently unearthed as far west as Kansu. Carbon-14 dates suggest that this horizon extends back well into the sixth millennium. See Wei Ching-wu, *KK* (1962/6), 290–291, 295; Su Ping-ch'i, *KKHP* (1965/1), 61–63; Chang, *Archaeology*, pp. 121–122; Liu Sui-sheng, *KK* (1979/2), 97–106, 118. Also see *KK* (1979/6), 558 for carbon-14 dates for the *sheng-wen* finds underlying Pan-p'o remains at Pei-shou-ling, Pao-chi-hsien, and notes 23 and 24 of Chapter IV. Publication of the Ta-ti-wan site (Yen Wei-ch'ing, *WW*, 1981/4, 1–8) and the new, comprehensive analysis of the *sheng-wen* pottery by Chang Ming-ch'uan and Chou Kuang-ch'i (*ibid.*, pp. 9–15, 86) were received while this study was in press.

PART ONE

WESTERN CHINA

Chapter 1

THE PAN-SHAN TRADITION

Whether some initial phase of the Pan-shan tradition is, or is not, the earliest painted ware of Western China arises as the most fundamental question posed by this tradition in terms of the history of ceramics in neolithic China. The recent carbon-14 date ascertained for Pan-shan pottery discovered at Ch'ing-kang-ch'a near Lanchou of (ZK 25) 2475 ± 150 B. C., compared with the carbon date of (ZK 108) 3100 ± 190 B. C. for Ma-chia-yao, would assuredly suggest that it is not.¹) Yet it must be kept in mind that these dates pertain, not to the cultures as a whole, but only to one or another specific stage within the development of each. In effect, a more precise correlation of Pan-shan to other cultures still requires a formulation of the stylistic evolution of that tradition and of other Kansu traditions.

Many of the older quandaries concerning Pan-shan have been resolved in recent times, but in their place have arisen new and equally troublesome problems. Thus the relation between Ch'i-chia and Pan-shan was once a much debated issue. J. G. Andersson had steadfastly insisted that Ch'i-chia preceded Pan-shan,²) but this has long since been refuted, first by Margit Bylin-Althin on the grounds that much of the Ch'i-chia pottery exhibits unmistakable similarities to vessels fashioned of sheet metal and hence cannot be considered a neolithic tradition at all.³) More recently Andersson's theory has been disproved altogether by the excavation of small pieces of metal from several Ch'i-chia sites and by numerous stratified sites in which Ch'i-chia remains have time and again been found to lie above Kansu painted wares.⁴) The relatively late dates of (ZK 15) 2050 ± 115 B. C. and (ZK 23) 2015 ± 115 B. C. for Ch'i-chia calculated on the basis of carbon-14 tests bear out the stratigraphic evidence.⁵)

As regards the Ma-ch'ang tradition there has never been any serious doubt that

it derives from and follows Pan-shan.⁸) Recent carbon dates have not altered the consensus of opinion on this point.⁹)

If the problem of the relationship of Pan-shan to Ch'i-chia and Ma-ch'ang may be said to be settled, that of the relationship of Pan-shan to Ma-chia-yao is still open to dispute. Again, Andersson raised the issue, by pronouncing that the Pan-shan ware, which in his time had been found only in graves, was the mortuary pottery of the very people who produced for their daily use the Ma-chia-yao ware, which in turn had never been found in a grave.¹⁰) Andersson thought that the dentate pattern endemic to Pan-shan ware, but never seen on Ma-chia-yao vessels, was connected with mortuary custom, and he designated it the 'death pattern.'¹¹)

Although it never made sense that these two wares, totally distinct in form and painting style, could have been produced by the same potters, some scholars writing even as late as the 1960s persisted in this belief.¹²) Recent excavations, which have revealed both a Pan-shan dwelling site and a Ma-chia-yao graveyard,¹³) have laid the problem to rest.

We are, then, free to recognize two separate traditions — Pan-shan and Ma-chia-yao — and the question as to which of the Kansu wares represents the earliest painted pottery in that area is narrowed to a contest between these two styles.¹²)

For the study of the Pan-shan tradition, it is the work of Nils Palmgren, who did attempt a stylistic analysis, which has been of lasting usefulness. Few of Palmgren's conceptions about stylistic developments are at all questionable, and it is our task primarily to disengage his conclusions from the typological framework to which he subjected them and to rearrange them, placing the emphasis more specifically on periodization and development.¹⁴)

For the present analysis, Palmgren's numerous suggestions about the evolutionary sequence of the Pan-shan vessels have afforded considerable guidance, and his most significant points should be singled out. Discussing the evolution of the amphora, the principal Pan-shan form, he observes a gradual, overall change in proportion. The early amphorae, in his view, are slightly wider than high; in those of the middle and late periods the breadth is increased, while in the latest period the height of the vessel is increased at the expense of the width.¹⁴) He further suggests that vessels without a rim are the most primitive; he also notes that the necks of the earlier vessels are either straight or else widen just slightly toward the top, while in the case of later vessels, the silhouette of the neck becomes more or less concave.¹⁵) He adds that the early vessels have ears, whereas the late ones do not.¹⁶)

His most pertinent observation in regard to the development of the painted designs is that in the course of time the percentage of black paint increases in proportion to the red.¹⁷)

Palmgren speaks only in terms of early, middle and late styles;¹⁸) it is my belief

that the situation can be clarified further and that the Pan-shan tradition is most conveniently broken down into a sequence of six specific styles.

What we shall term Style One (Figures 1–4), which corresponds to Palmgren's 'early style,'¹⁹⁾ is characterized by a décor composed solely of a number of alternating red and black horizontal bands circumscribing the upper portion of the vessel, one above the other and each separated from the next. The top edge of each black band is dentated.²⁰⁾ The necks are decorated in the same manner, although occasionally a crude trellis is used instead.

The vessels of this style belong to several types, evidently representing the most primitive examples of certain forms whose evolution may be traced through most of the subsequent Pan-shan styles. This stage knows only one type of amphora (Palmgren's B type), a wide vessel with tapering lower half, the mouth being nearly as wide as the diameter of the belly and with a simple rim that flares but slightly (Figure 1). Additional types include small pitchers with straight necks and rounded bodies to which a single annular handle is attached, and vessels of great simplicity with no neck and one handle (Figures 2, 3) or with two handles halfway down on either side.²¹⁾ It is significant that the bowl with painted interior may be counted among the earliest forms (Figure 4).

Palmgren adduced many reasons for his claim that this group was earliest: "The simple pattern, the abundance of vessels of primitive manufacture and very irregular shape, the occurrence of vessels without a border, the red color in some borders . . . , and [the fact that] the profile of the necks is straight and vertical — all this is evidence that the décor family as a whole is to be regarded as an early group in Pan Shan pottery."²²⁾

While it is certain that the décor of alternating red and black horizontal bands continues to be employed on later vessels, at least into the period of Style Two, the particular vessels illustrated by Figures 1–4 nonetheless are recognizably separate from all other Pan-shan wares in that they are also technically the most primitive in regard to their shapes, their soft and uneven surfaces and the unrefined manner in which the paint is applied. These vessels are so far not known to carry decorative patterns more complex than that of elementary horizontal lines. For these reasons the vessels belonging to this group apparently represent the earliest painted ware of the Pan-shan tradition.

With the initiation of Style Two, spirals replace the horizontal bands as the principal decorative scheme (Figures 5–15). These spirals are invariably drawn in red; they consist of four small, equidistant circles connected by curving arms reaching from the lower right side of one circle to the top of the next, creating a sense of leftward movement. Following the outlines of the running spirals are curved, red and black dentate lines in alternation. Producing a strong upward thrust in the design as a whole, these lines echo and magnify the sense of rhythm established by the spiral. The fact that emphasis is given to one motif — the single red line of the spiral — while the remainder of the lines are supportive in nature,

signals a change in focus from Style One, where all the lines were more or less equal in importance.

It was during this period, furthermore, that a number of other new patterns made their initial appearance. Most notable among them is the so-called 'gourd' pattern,²³⁾ which consists of a series of vertically oriented, vaguely figure-eight designs outlined in red and filled with a fine-mesh trellis pattern in black (Figures 8–10).²⁴⁾ Between the gourds and parallel to their contours are drawn alternating black and red lines. These fillers operate on a similar principle to those in the spiral designs, in this case creating an upward, flame-like movement, which counters the outward swelling of the gourds. On the smaller amphorae, however, the gourd designs have relatively straight sides, and the black dentate lines bordering them are worked so as to leave between them a simple zigzag in reserve, thus introducing a modulation to the pattern (Figure 10).²⁵⁾

Apart from the gourd, the artists of this period experimented with the following designs: multiple consecutive zigzags which produce continuous upward and downward thrusts across the surface;²⁶⁾ multiple parallel arcs utilizing red bands alternating with a series of four thin black ones (Figure 11); a lozenge pattern built from intersecting red diagonal lines, bordered on the inside and outside by black dentate lines and with the resulting rhomboids filled with crossed diagonals (Figure 12); and a pattern of adjacent concentric circles.²⁷⁾

A final decorative scheme whose beginnings may convincingly be placed within this period consists in dividing the surface of the vessel into a number of panels by vertical red lines bordered on either side by black dentate lines; within these panels a gridwork of diagonal lines is inscribed and alternating squares are painted in black, with the result that a checkerboard pattern emerges (Figure 13). The checkerboard being somewhat less than symmetrical, and the red lines not exactly vertical, even this scheme is not entirely static.

In their forms the vessels of this phase are more regular and firmer, and their surfaces are harder and smoother. There is a tendency for the amphora to become more squat in appearance, and for its center of gravity to be somewhat lower. The Type A amphora²⁸⁾ with tall cylindrical neck is present; and affixed to its rim at each side are ears with serrate edges (Figures 6, 8, 10). The decoration on the necks of the amphorae and on the small jugs nearly always consists of a row of spiky dentations with a band of trellis above (Figures 8, 10, 11–13). The bowl painted on the interior is continued, and occasionally it is ornamented with a spiral-like design (Figures 14, 15).

In general, Style Two exhibits more standardized and more assured forms and a more varied range of painted designs. The designs show a liveliness and a persistent concern with movement; yet they still have an air of coarseness about them that imparts a certain stiffness to that movement. It is a constant feature of this phase that the red and black lines are — as in Style One — approximately equal in width.

By contrast, the Third Style (Figures 16–28) is marked by a single striking change in the *décor*: the red lines have become very much thinner, and their role as primary guide lines is more clearly defined; the black lines, to the contrary, have increased in width so that they are now nearly three times as wide as the red ones. Further, the serrate pattern along the upper side of the black bands has become less prominent, appearing like a series of short hair-like lines rather than as a row of triangular dentations.

The spiral continues as the chief decorative scheme (Figures 16, 17); but the nucleus has increased somewhat in size, and occasionally it is accentuated by a small dot in the center or subdivided by a diagonal line with cross striations. More importantly, the effect of the whole is far more rhythmical and fluid than before, and the relationship between the red line and its echo in black more completely understood.

The use of the narrow red line and the contrasting wider black line is equally the determining factor in the new look of the other familiar *décor* patterns. The zigzag is simplified so that it consists of a single red guide line embedded in black bands (Figure 18); the pattern of consecutive circles or ovals is similarly simplified and attains a greater clarity (Figures 19, 20). The checkerboard pattern (Figures 23, 24) appears now larger and bolder, and, moreover, a new experiment, only hinted at before, is attempted: the surface of the vessel may be divided, not into vertical panels, but diagonally by slanting lines which cause the pattern as a whole to seem to unwind slowly from the neck (Figure 24). This arrangement is also applied to a design of slender biconvex forms in reserve (Figure 25). Various other designs are developed, some of them relatively modest, like the series of short diagonal lines with cross striations (Figures 21); occasionally these are featured as the primary *décor*, and on other vessels (Figure 19), as secondary elements. Further novelties involve rows of large-scale biconvex shapes in reserve (Figure 22).

Concurrently, we find the first anthropomorphic designs (Figures 26–28), usually fitted between the more common *décor* elements such as spirals or concentric circles. These figures, of a formalized character and devoid of any life blood of their own, seem entirely the creatures of the geometric temperament that informs all other Pan-shan painting. The head, shaped as a circle about the same size as the nuclei of the spirals, is poised atop a vertical red line, from which two V-shaped arms, bent at the elbows, branch out. The area around the figures is structured by alternating thin red and wider black lines parallel to those of the figure. In the first example (Figure 26), the second pair of red lines, in keeping with the method used constantly on other vessels, are to be read as fillers, not as legs attached to the body in an anatomically impossible manner. In other instances, the second set of red lines parallel to the arms are linked to the figure itself, so that they can be interpreted as legs (Figure 27).

Moreover at this point there is evidence not only of anthropomorphic designs,

but of something more rare: the apparent depiction of a tree or plant. Above each handle on the sides of a vessel decorated in a style close to those bearing the anthropomorphic designs, there appears, somewhat enigmatically, a vertical red line with two, symmetrically branching, upreaching arms, which it is tempting to interpret as a plant (Figure 28).

The designs on the neck of the Style Three amphora are made up of the familiar trellis and dentation pattern, but more common and more telling are the less restrained rows of isolated X's, criss-crosses, or horizontally aligned V's. Red pigment is all but eliminated from the decoration of the necks by this period. The necks of the vessels tend to flare slightly more than before; the bodies, especially of the low-necked amphora, have become more rounded and sit more comfortably on the ground. The lugs, placed half-way down on the body at the widest point, appear to pull away from the vessel, as if to stretch its girth even wider. With their more evenly rounded contours and the more gentle effect of the painted designs, a certain delicacy and freshness pervades these works, and a generally lighter touch has come to prevail.

The Fourth Pan-shan Style, which may aptly be termed the 'pre-classical' phase, as it is the harbinger of the grand style that was to follow, is witness to distinctive changes both in designs and forms (Figures 29–32). Most remarkable, as Palmgren noted in a general way,²⁹) is a development which I believe may be ascribed specifically to this style: namely that in the spiral designs, the originally small nucleus is expanded into one roughly twice its former size (Figure 29). The resultant larger areas in reserve within the nucleus are transformed into light, almost luminous disks set within the dense blackness of the adjoining arcs. These nuclei enclose any number of new motifs, striking in their own right, the most successful of which is the diagonally oriented cross with a small, freely executed crescent in each quadrant. The red lines which describe the main designs are of the same thinness and retain the calligraphic suppleness of the preceding style, but the black lines have increased in width so much that they are no longer lines or bands, but expanses of a rich blackness, within which the red lines rise, crest and fall. Against the enlarged dimensions of the black areas, the dentate or hair-like fringe appears ever more diminutive.

The second major design of this period, the 'gourd' (Figure 30), has changed dramatically from its last appearance in Style Two. The gourd, like the nuclei of the spiral, has increased in size, and now only four can be made to fit around the circumference of the vessel. Moreover, the gourd has been re-shaped, so that the lower part of the figure-eight is proportionally far larger than the upper part; the fullness of the gourd now corresponds sensibly in placement to the zone of the vessel's greatest width. The gourds are bordered by a wide line, and the spaces between them are filled, not with the more awkward schema of lines paralleling the design, but with an open and easy network of lines which leave leaf-like shapes in reserve.

Apart from the spiral and gourd, there are few other designs which can be securely attributed to this style. The now more polished rhombic pattern inscribed in red is skirted by wide black arcs (Figure 31); the pattern of biconvex lentoids in reserve appears; and in one instance it has been re-oriented on a diagonal, each row slanted in a direction opposite to the one above (Figure 32).

The amphora is by far the best represented vessel of the pre-classical style, and it has, by contrast to those of the preceding phase, gained a special loftiness. While the mantel retains its gently rounded outline, the lower unpainted portion is more elongated and contracts to a narrower base. The necks are shorter and broader; they have clearly articulated, slightly everted rims; and only the most tiny ears remain. The designs on the necks of the Style Four vessels are of two types only: a fine meshed trellis or double rows of dentations pointing upwards.

The vessels of the 'pre-classic' phase are the first Pan-shan works which may be said to approach monumentality. The regularization of the neck décor, along with the frequent deletion of the wavy line beneath the border of the design, imparts to the vessel a firmer and more compact appearance. The repertory of designs has been reduced; those that are retained are emboldened and applied with an altogether higher measure of control. The spirals move across the surface at a slowed pace, and there is mature grace and dignity to the curving of the spiral arms. On the necks of these vessels red is no longer used.

The vessels of the Fifth, or Classic, Style (Figures 33–38) mark the ultimate achievement of the Pan-shan artists. The style is distinguished above all by still further emphasis upon the use of black. The application of black in the décor of the previous style, in ever broader bands, bears witness to a deepening attention to its function; but in the Fifth Style, black determines the modifications to all the decorative schemes. The design employing foliate forms in reserve (Figure 35) has been greatly simplified, with the result that a substantially larger area of the surface is now black; the elements in reserve are reduced in number and spaced more widely. Also characteristic of this style is a design almost exclusively in black of a field of trellis encompassing four pointed ovals filled by leaf shapes in reserve (Figure 36).³⁰ The vessels in garland décor are painted with broad expanses of black, in arcs which sweep down across the vessel's mantel (Figure 37). On the smaller vessels (Figure 38), the checkerboard pattern, long since the décor most preferred on vessels of the type, is now apparently employed to the exclusion of almost any other decorative scheme. The checker squares, here larger than in the foregoing phase, are executed with a new proficiency; they stand on the surface, strong and resplendent.

In the gourd design (Figure 34), substantial alterations have been made by opening the sides of the gourd at the upper part of the figure eight so that they merge with those of the adjacent figures. The separate designs are thereby joined, providing a sense of unity and unbroken rhythm to the surface of the vessel as a

whole. Moreover, the broad black bands delimiting these figures give form to the areas they seem to exclude, and the shapes thus newly created are no longer only interstitial ornament, but have an independent impact on the surface, equal to and harmoniously counterbalancing that of the pendulous gourds. The forms between the gourds are enlivened by a sparing use of broad black lines in configurations which press upward and outward in the manner of a bow. Like the black lines encompassing the gourds, these shapes are painted in bold unhesitating strokes.³¹)

The spiral too has changed in subtle ways. The nuclei have grown larger, and often they are filled with the checkerboards so highly favored by artists of the period. There can be little doubt that the amphora of Figure 33 ranks supreme among Pan-shan designs. Yet within its design may be detected a potential danger: were the balance between the spiral and the designs within the nuclei, the very precariousness of which is one of the appealing features of this style, to be disturbed, were the nuclei further enlarged and greater emphasis allotted to the secondary pattern, the dynamics of the spiral, necessarily would diminish.

The amphora with which these painters worked is of an equal perfection. The proportions are generally the same as in those which immediately preceded them, save that the vessels often contract to a more narrow base and that care has been given to the articulation of the rims, which have a tendency, most pronounced in our example Figure 33, to curve strongly outward. Somewhat flaring rims and narrow bases are also features of the smaller vessels, whose bodies are generally more low-slung than they previously were (Figure 38).

The classic style would seem to have resolved once and for all the artistic problems inherent in the available range of designs. The artists that followed in their stead might equal, but hardly surpass, what had already been accomplished. The repetitiveness of such efforts foretells the tradition's decline.

The classic style is readily distinguished from the period of Style Six that followed (Figures 40–45). The painted designs are of an obtrusive character rarely encountered in Chinese neolithic pottery. Curiously, these designs also involve a return to older ideas — that is, there appear within them certain archaistic elements.

The designs are of two types. The first, which derives from the two previous styles, is exemplified by crudely painted spirals (Figures 40–41), their nuclei filled by a grid of crossed diagonals, with the resulting squares decorated by a trellis in black. The nuclei are so large, the connecting spiral arms so short, and the rest of the décor so strident, that the rhythmic quality inherent in the spiral is almost obscured. The second, simpler and more static type of décor, consists of tiresome single rows of concatenated rhomboids or circles (Figures 42–43). Just as often red lines and black dentate bands are left to stand alone (Figure 44).

Whereas the decoration of the necks by a trellis pattern is a carry-over from the two previous styles, the double rows of big slanting dentations on the necks of a

number of amphorae are something new (Figures 40, 44). These, as well as the frequent insistence on large dentations in the rest of the décor, observable even on some of the smaller vessels (Figure 45), suggest that the artisans, at a loss for innovative patterns, turned to the past and selected for emphasis the oldest hallmark of Pan-shan pottery — the dentate band.³²⁾

The patterns of spirals with their enlarged nuclei and those of concatenated circles are transitional to the ensuing Ma-ch'ang tradition (Figure 46), from which both the spiral and the dentate pattern were progressively eliminated.³³⁾

Perhaps the most surprising fact emerging from a study of recent Pan-shan pottery finds is that none of this new material can be said to enlarge the general typology beyond that deducible from the vessels assembled by Andersson.³⁴⁾ It is to be asked, then, whether the stylistic history of the Pan-shan tradition is not already essentially complete.

From the evidence presently available, the production of the ware seems to have been centered roughly in the Lanchou area, with one site, that of Chu-chia-chai in Hsi-ning-hsien,³⁵⁾ at a distance to the northwest, and with nearly all the remaining sites lying south of Lanchou in the area bordered by the Huang, T'ao and Ta-hsia rivers. The ware is scarcely known north of the Huang-ho,³⁶⁾ nor does it seem to have been a significant factor in the Wei River region. Apart from Lanchou,³⁷⁾ the areas where Pan-shan finds have been recorded include Tung-hsing,³⁸⁾ Kuang-ho,³⁹⁾ Ning-ting,⁴⁰⁾ and Lin-t'ao counties.⁴¹⁾

One of the most important discoveries of Pan-shan pottery was made at the Ch'ing-kang-ch'a dwelling site, located south of the Huang-ho, some thirty kilometers from Lanchou.⁴²⁾ There excavators uncovered the foundations of a squarish house (F 1); within the limits of this structure were found stone implements in plentiful array, some flaked tools, others polished and preforated, and no fewer than twelve vessels, three of which are painted. The spiral designs on the three amphorae (e. g. Figure 39) are more closely comparable to those of Style Six than to any of the preceding styles.⁴³⁾

Remnants of charred wood from F 1 have been carbon-dated to (ZK 25) 2475 ± 150 B.C. and (BK 75029) 2380 ± 150 B. C.⁴⁴⁾ On the basis of the vessels discovered at F 1, we are in a position to state that the carbon-date, hitherto ascribed to the Pan-shan culture as a whole, applies only to the latest phase of that culture;⁴⁵⁾ and we are led to the conclusion that the beginning of this culture must lie farther back in time. Moreover, the carbon-date for Ch'ing-kang-ch'a — now that we have been able to specify to which style this date pertains — can no longer be elicited as proof that Pan-shan as a whole postdates Ma-chia-yao, one phase of which is dated to (ZK 108) 3100 ± 190 B. C. ⁴⁶⁾

Since in the following chapter I shall offer evidence that an initial stage of Ma-chia-yao, dated on the basis of thermoluminescence testing to the period of 3900–3600 B. C.,⁴⁷⁾ is coeval with and derives from an early phase of Pan-shan, the possibility arises that the origins of Pan-shan may date back well into the fourth

millennium. That the Pan-shan tradition might have endured for so long a period of time and that its evolution therefore may have been very gradual is somewhat surprising, and may only be ascribed to its having been maintained in relative isolation, due, perhaps, to the Pan-shan people having been ethnically or culturally distinct from their neighbors.

Notes to Chapter 1

¹⁾ Hsia Nai, *KK*(1977/4), 230; Kuo Te-yung, *KK*(1972/3), 53.

²⁾ J. Gunnar Andersson, *Children of the Yellow Earth* (New York, 1934), pp. 241–242 and idem, *BMFEA*, 15 (1943), 82. Andersson's argument is the following: "We have in Kansu such an unbroken chain of ceramic development from Yang Shao [by which he means Pan-shan and Ma-chia-yao] through Ma Chang, Hsin Tien and Ssu Wa far into the Bronze Age that we clearly realize that Ch'i Chia cannot be placed within this ceramic sequence and still less at the top of it. Ch'i chia is undoubtedly a pre-metallic stage, and consequently we are forced to mark it down as pre-Yang Shao." (*ibid.*)

Palmgren stated that he also believed Ch'i-chia to be more ancient than Pan-shan, but he was sufficiently wary to indicate that Pan-shan was an entirely independent tradition in no way deriving from it; he may have been not entirely convinced of his mentor's view; see Nils Palmgren, *Kansu Mortuary Urns of the Pan Shan and Ma Chang Groups* (Peking, 1934), pp. 45, 165.

³⁾ Margit Bylin-Althin, *BMFEA*, 18 (1946), 383–498. Bylin-Althin claimed: "Undoubtedly there are no remnants of metal in the Ch'i Chia culture, but that is no reason for placing it first in time. The absence of metal in the finds might be due to a mere accident. I am convinced that the inhabitants of Ch'i Chia P'ing had been in contact with a metal-culture which has influenced the forms of the vessels . . . Their often high necks and long handles are not features that are typical of pottery vessels. The imitation of metal is striking in the pot reproduced in [Figure 241]. The long handle of this vessel has, on the upper part, a clearly visible joint, marked by an incision and two 'rivet heads'. The same 'rivet heads' appear also on the spout. Even the kidney-shaped opening in the superstructure, the extremely high neck and the body with its bulbous belly and narrow foot part must have been influenced by metal models." (*ibid.*, pp. 462–463; 465). She further remarks (p.465) upon the similarity of this particular Ch'i-chia *ho* to the well-known bronze *li-ho*, published by Otto Kummel in *Chinesische Bronzen* (Berlin 1928), p. 9, pls. 5 and 6, which prior to its loss during World War II, was owned by the Berlin Museum.

⁴⁾ Hsia Nai, *KKHP*, 3 (1948), 101–117; An Chih-min, *KKTH* (1959/6), 9–19; Chang Hsueh-cheng, *KKTH* (1958/5), 1–15; *KKTH* (1958/9), 36–49; Kuo Te-yung, *KKTH* (1958/7), 6–16; *KK* (1959/3), 138–142, 146; Cheng Nai-wu and Hsieh Tuan-chü, *KK* (1960/3), 10–11; *KKHP* (1974/2), 29–62; Hsieh Tuan-chü, *KKHP* (1975/2), 57–96; Wei Huai-heng, *KKHP* (1978/4), 421–448.

⁵⁾ Hsia Nai, *KK* (1977/4), 230.

⁶⁾ Palmgren, *Kansu Mortuary Urns*, pp. 81–91, 168–173; G. D. Wu, *Prehistoric Pottery in China* (London, 1938), p. 103; Andersson, *BMFEA*, 15 (1943), 215.

⁷⁾ Radio-carbon dates for Ma-ch'ang sites range from (BK 75009) 2280 ± 140 B. C. to (BK 75012) 2145 ± 120 B. C.; Hsia Nai, *KK* (1977/4), 230.

⁸⁾ Andersson, *Children of the Yellow Earth*, pp. 313–314, and *BMFEA*, 15 (1943), 98: "At first the ceramic material of the Ma Chia Yao terrace appears quite unlike the stately burial urns of the P'an Shan mountains, and we shall, indeed, find in what follows a fundamental opposition between them, though the essential difference relates to *custom* and not to *age*. . . . Decisive in the determination of their age is the fact that in the overwhelming majority of the 6,043 fragments of vessels which we brought home from Ma Chia Yao there occur a very small, it is true, but also significant minority of fragments of P'an Shan urns The scarcity of P'an Shan fragments in the Ma Cha Yao settlement may probably be attributed to the fact that some at least of the potters making P'an Shan urns dwelt within the Ma Chia Yao settlement and had their workshops there. Now and then an accident occurred, an urn was occasionally broken, and the pieces were carried about the settlement by playing children If this interpretation is correct, we shall find in the few fragments of P'an Shan urns at Ma Chia Yao a proof that this settlement represents one of the villages which buried their dead up on the P'an Shan mountains."

⁹⁾ Andersson, *Children of the Yellow Earth*, pp. 315–319; *BMFEA*, 15 (1943), 99.

¹⁰⁾ Chang Kwang-chih, *Archaeology* (1968 ed.), p. 103.

¹¹⁾ Kuo Te-yung, *KK* (1972/3), 26–31, pl. 1; Yüan An-chih, *WW* (1975/6), 76–84; pl. 3.

¹²⁾ Cheng Tê-k'un, in his cautious fashion, reached no decision as to the priority of Pan-shan or Ma-chia-yao. His unwillingness to make such a determination is based upon a theoretical stance: "Typological studies in decorative motifs alone, can never supply a reliable chronology. Without any stratigraphical reference it would be impossible to establish a relative sequence." *New Light on Prehistoric China* (Cambridge, 1956), pp. 25, 27.

Chang Kwang-chih, who originally considered Pan-shan the older of the two traditions (*Archaeology*, 1963 edition, p. 74), has reversed his view on the matter: "Stratigraphic and stylistic studies now suggest the following sequence of the Kansu Yang-shao phases: Ma-chia-yao, earliest; Pan-shan, following; and Ma-ch'ang latest and farthest west." (1977 edition, p. 131.) Although this new sequence fits well with Chang's Nuclear Theory, in point of fact there exists no stratigraphical evidence to support it. This revised sequence is in keeping with the view of Shih Hsing-pang (*KK*, 1962/6, 318–329), whose article Chang has cited. Shih had studied Palmgren's typology of Pan-shan designs and felt that several of them derive from Ma-chia-yao; and he moreover considered Pan-shan to represent a greater degree of aesthetic sophistication than Ma-chia-yao (*ibid.*, p. 320). Other scholars might feel with equal justification that, to the contrary, the greater degree of sophistication is to be found with Ma-chia-yao.

¹³⁾ Such a shift of focus would likely have met with Palmgren's full accord; for one feels that he himself would have preferred this type of arrangement, had the task assigned to him not been that of a cataloguer (see *Kansu Mortuary Urns*, p. viii). His deeper scholarly inclinations evidently pointed toward a different type of analysis: "In my view and so far as an exhaustive analysis of the material can reveal with any measure of validity, they [Pan-shan and Ma-ch'ang] represent material that shows a distinct line of continuity, in which the evolution of forms and designs proceeds along organic lines and is determinable in its different phases. From the standpoint of form, these two ceramic groups are of extraordinary interest, seeing that they comprise a number of component links, and a limited, yet typical, section of a single chain of development." (*Ibid.*, p. 156.)

¹⁴⁾ *Ibid.*, pp. 28, 158.

¹⁵⁾ *Ibid.*, pp. 25, 158.

¹⁶⁾ *Ibid.*, p. 158.

¹⁷⁾ *Ibid.*, pp. 66, 167.

¹⁸⁾ *Ibid.*, pp. 165–168.

¹⁹⁾ *Ibid.* See the classifications for the vessels illustrated in plates I–XX, XXXIV–XXXVIII.

²⁰⁾ Palmgren felt that the dentation derives from the appliqué patterns decorating unpainted Pan-shan wares (*ibid.*, p. 50). Another possibility is that it derives from patterns formed by weaving, of which, of course, no evidence is preserved.

²¹⁾ *Ibid.*, pl. I: 2.

²²⁾ *Ibid.*, pp. 52–53.

²³⁾ *Ibid.*, pp. 74–78.

²⁴⁾ A vessel of the same shape as Figure 9 and decorated with the same type of gourd design has been found at Ti-pa-p'ing, Kuang-ho-hsien (Han Chi-shou, *KKHP*, 1978/2, pl. 12, fig. 2).

²⁵⁾ The smaller amphora-shaped jugs fit easily into Pan-shan Style Two, but there is good justification for Palmgren's suspicion that this closely connected group of little vessels painted with gourd patterns was the specialty of some specific group of craftsmen (*Kansu Mortuary Urns*, p. 75). These are among the select number of vessels that form a transitional link between the Pan-shan and Ma-chia-yao vessels. They are in evidence at the Lanchou site of Hua-chia-tzu, where both early Pan-shan and proto-Ma-chia-yao vessels were unearthed; *KKHP* (1980/2), pl. 5: 1–2; see Chapter II, note 19.

²⁶⁾ Palmgren, pl. III: 4; pl. VI: 1.

²⁷⁾ *Ibid.*, pl. V: 6.

²⁸⁾ *Ibid.*, p. 158.

²⁹⁾ *Ibid.*, p. 66.

³⁰⁾ Cf. Palmgren, pl. XVI: 8.

³¹⁾ Gourd designs characteristic of Style Five may be seen on vessels excavated in 1973 from the site of Ti-pa-p'ing, Kuang-ho-hsien (Han Chi-shou, *KKHP*, 1978/2, pl. 2 figs. 1, 7) and in one example from Shih-li-tien, near Lanchou (P'u Chao-fu, *KK*, 1980/1, pl. 2, fig. 5).

³²⁾ A number of vessels belonging to Style Six were recovered in 1976 from Sha-ching-i, Chiao-chia-chuang in the vicinity of Lanchou; P'u Chao-fu, *KK* (1980/1), pl. 1, figs. 1, 3, 6, 7; *Kansu ts'ai-t'ao*, nos. 99, 101, 102, 107, 108, 110. Other vessels from the same site are more closely allied to Style 5; *KK* (1980/1), pl. 1, figs. 2, 8, 9; see note 33 below.

³³⁾ Palmgren, p. 169. The Ma-ch'ang tradition, a late derivative of Pan-shan, falls outside the limits of the present inquiry. The tradition has been discussed at length by Palmgren (*ibid.*, pp. 108–173; pls. XXII–XXX, XXXIX–XLI). See *KK* (1976/6), 365–377 for some recent finds.

³⁴⁾ Significant numbers of Pan-shan vessels recovered from the following sites have been published within the last five years: Chang-chia-t'ai, Ching-t'ai-hsien (Han Chi-shou, *KK*, 1976/3, 180–186, pls. 3–5); Ti-pa-p'ing, Kuang-ho-hsien (*idem*, *KKHP*, 1978/2, 193–210, pls. 1–12); Chiao-chia-chuang and Shih-li-tien near Lanchou (P'u Chao-fu, *KK* 1980/1, 7–10, pls. 1–2); and Hua-chai-tzu, also in the Lanchou vicinity (*KKHP*, 1980/2, 211–238, pls. 1–8; most of the wares from Hua-chai-tzu, however, are types transitional between Pan-shan and Ma-chia-yao, see Chapter II, note 19). Also see *Kansu ts'ai-t'ao*, nos. 61–126.

P'u Chao-fu has placed these new discoveries into an evolutionary sequence comprised of four stages: Stage 1, Hua-chai-tzu; Stage 2, Ti-pa-p'ing; Stage 3, Chang-chia-t'ai; Stage 4, Chao-chia-chuang and Shih-li-tien (*KK*, 1980/1, 10). His sequence is not essentially in disagreement with my own. Hua-chia-tzu corresponds to my Style Two; Chang-chia-t'ai contains material of Styles Two and Three; most of the pottery from Shih-li-tien belongs to Style Five; Chiao-chia-chuang appears to be transitional between Styles Five and Six. The vessels from Ti-pa-p'ing, on the other hand, represent a broader range of styles.

³⁵⁾ J. G. Andersson, *BMFEA*, 17 (1945), pls. 1: 1; 2: 4; 4: 4; 7: 2.

³⁶⁾ An exception is the site of Chang-chia-t'ai in Ch'ing-t'ai-hsien (Han Chi-shou, *KK*, 1976/3, 180–186, pls. 3–5).

³⁷⁾ Ho Lo-fu, *KKHP* (1957/1) pl. 4, fig. 1.

³⁸⁾ Chang Hsüeh-cheng, *KKHP* (1960/2), 14, fig. 2: 2.

³⁹⁾ Han Chi-shou, *KKHP* (1978/2), 193–210, pls. 1–12.

⁴⁰⁾ Andersson, *BMFEA*, 15 (1943), 114–115.

⁴¹⁾ Bo Sommarström, *BMFEA*, 28 (1956), 85, pl. 46: 1–5; Hsia Nai, *KKHP*, 4 (1949), 71–138; pl. VI; Chang Hsüeh-cheng, *KKHP* (1960/2), 14, fig. 2: 2, pl. 1: 3. The only Pan-shan grave actually excavated by Andersson was at the Pien-chia-kou site in the Pan-shan hills. The grave contained a skeleton in hocker position surrounded by a wealth of articles including stone implements and twelve vessels, four of which were unpainted grey pottery with appliqué decoration, while the remaining eight were painted. On the basis of the painted ware the grave may be ascribed to the period of Style Four (Andersson, *Children of the Yellow Earth*, pp. 270–271, pls. 30–32; *idem*, *BMFEA*, 15, 1943, 114–115, pl. 76).

⁴²⁾ Kuo Te-yung, *KK* (1972/3), 26–31, 53, pl. 1. In the Fall of 1963, a survey was made of some 80,000 square meters in an area to the northwest of the town of Ch'ing-kang-ch'a. Within the four trenches that were excavated were discovered one house, two kilns, two ash pits and one burial. The sherds found within the kiln No. 2 (*ibid.*, p. 29, fig. 6: 7–11) were painted in the same style as the amphorae from F 1, and we may assume that the wares unearthed at Ch'ing-kang-ch'a were locally produced.

⁴³⁾ *Ibid.*, pl. 31, fig. 7: 1–3; pl. 1: 1–2.

⁴⁴⁾ Hsia Nai, *KK* (1977/4), 230.

⁴⁵⁾ P'u Chao-fu also recognized that the vessels from Ch'ing-kang-ch'a F1 are relatively late, and he assigned them to his fourth, or final, Pan-shan stage (*KK*, 1980/1, 10).

⁴⁶⁾ Hsia Nai, *KK* (1977/4), 230.

⁴⁷⁾ Thermoluminescence testing carried out by William Young of the Museum of Fine Arts, Boston, Department of Conservation, March, 1974.

THE MA-CHIA-YAO TRADITION

The Ma-chia-yao pottery was first discovered at the eponymic site in 1924.¹⁾ The village of Ma-chia-yao is located on a river plain in Lin-t'ao-hsien (formerly called Ti-tao-hsien) twelve kilometers south of the *hsien* city and half a kilometer west of the T'ao river. To the west of the village rises a Malan terrace some fifty meters high; to the south of the village this terrace is cut by a ravine running in a westerly direction. The remnants of the Ma-chia-yao culture, including pottery, lithic tools, bone implements and remains of animals were unearthed on the lower terrace, about twenty-five meters high, formed on the north side of the ravine. The cultural deposit was estimated to be approximately two meters in depth and to cover a narrow strip some 350 meters long on an east-west axis. The site, which yielded more than 6000 sherds, was discovered and excavated in an unsystematic manner by one Chin who was in the employ of Andersson; it was visited by Andersson only once, and then only for a short period of time.²⁾

Since then the site has evidently not been reinvestigated, with the exception of an archaeological survey conducted in 1957 and recorded briefly by Chang Hsüeh-cheng in *K'ao-ku t'ung-hsün*, 1958.³⁾ Owing to the stratigraphy revealed by this second investigation, this survey became the watershed in the ongoing debate about the relationship of Ma-chia-yao to the Central Plains pottery traditions. It marks a division into the views of Andersson and others, which reflect the state of affairs before the 1957 discovery, and those of Chinese archaeologists as well as such scholars in the West as Chang Kwang-chih, William Watson and Chêng Tê-k'un,⁴⁾ all of whom based their ideas upon the stratigraphy revealed in the course of this survey.

Andersson, perceptively noting the similarity between the south Kansu ware and that in Honan, believed Ma-chia-yao and the Chung-yüan Yang-shao to be contemporaneous.⁵⁾ Ludwig Bachhofer⁶⁾ and Max Loehr,⁷⁾ who shared a predilection, always unpalatable to those of sinocentric bent, to see the painted ware of China as ultimately deriving from that of the West, naturally felt, although they had no conclusive proof, that it was Kansu, rather than the Central Plains, where the Chinese painted pottery tradition originated. Bachhofer and Loehr furthermore were wisely convinced, on the basis of stylistic considerations, that the Honan pottery must have been preceded by that of Kansu.⁸⁾

Yet Chang Hsüeh-cheng's report of the 1957 survey would seem to offer indisputable proof to the contrary. The substance of this report, in the adaptation of Chang Kwang-chih reads as follows:

On the First Terrace (10–30 m) at the northern bank of the Ma-yü ravine, south of Ma-chia-yao, the cultural deposits are fairly deep. A clear section is seen on an exposed surface. The uppermost layer is a stratum of disturbed modern humus. Beneath the humus, about one meter in thickness, is a layer of prehistoric cultural deposits, about 3.5 meters thick. The upper meter and a half of this layer is composed of loose ashes, from which were derived a great number of potsherds. These are of fine or coarse paste, tempered or not tempered, some with painted designs. The paint was applied in black pigment. The designs are in most cases composed of thick lines, and include many parallel lines and black dots. Sherds painted on the inner surface, and rim sherds with complicated painted patterns are also found. The forms of the painted sherds include bowls, jars, basins and pots. The unpainted, fine-pasted red or gray sherds are mostly parts of bowls. The sand-tempered sherds are mostly cord-marked, and are in the forms of pots and basins with out-curving, flaring mouths. These types are similar to the Ma-chia-yao types excavated from Yen-erh-wan, near Lan-chou.

The ashy layers below this stratum consist of compact earth, about two meters thick. Cultural remains from this lower layer include polished stone chisels, bone artifacts, gray rings of baked clay, and potsherds. Some of the sherds are painted in black pigment in the designs of wavy triangles, hooked dots, thin parallel lines, thick bands, and net patterns. There are also some rim sherds with simple painted patterns, sherds of basins with inwardly curved mouths, plain fine-pasted red and gray sherds, and a great number of cord-marked pointed-bottomed jars and thick-rimmed basins and pots. In short, this lower cultural stratum is similar to the Yangshao types of the Upper Wei.⁹⁾

The stratigraphy of the Ma-yü ravine where typical Ma-chia-yao ware was found in a stratum above the one yielding ware of the Wei River Yang-shao type suggests strongly that the Ma-chia-yao style was later than that of the Wei River area, which is assumed to have derived from the Chung-yüan region.

The conclusion drawn from this report that Ma-chia-yao must be assigned a date later than the Chung-yüan traditions has been widely accepted, and all subsequent discussions about the development of the painted wares have used the findings of this report as proven fact.¹⁰⁾ Most significantly it has served as a major component in the formulation of the Nuclear Theory, which postulates that the Chinese neolithic culture originated in the Central Plains area and only later moved westward.¹¹⁾ Pursuant to such theories, Ma-chia-yao is usually envisaged as the first painted pottery culture to emerge in Kansu, its affinities to the Chung-yüan traditions being greater than those shown by other Kansu wares; Pan-shan is seen as a derivative of Ma-chia-yao, and Ma-ch'ang, the tradition supposedly located farthest west, is interpreted as being even later in date.¹²⁾

The stratigraphic evidence provided by the Ma-yü ravine has subsequently been confirmed by several sites along the upper reaches of the Wei River, including Shih-ling-hsia in Wu-shan-hsien and Lo-chia-kou in T'ien-shui-hsien. At both sites a level containing Wei River Yang-shao remains was found below a lower level from which Ma-chia-yao wares were unearthed.¹³⁾

However, it must be pointed out that the conclusions drawn from the reports of the Ma-yü finds, as well as those of the Wei River valley sites, are not so incontrovertible as they are generally assumed to be. There are two matters regarding the pottery recovered from these sites which have not been taken into account. First, the painted décor of the Wei River Yang-shao wares is usually more closely in keeping with the Ma-chia-yao tradition than with Miao-ti-kou, and it may ultimately have derived from a fairly early phase of the Ma-chia-yao tradition. On the other hand, the Ma-chia-yao wares from the upper levels at these sites appear to belong exclusively to the later phases of that style.¹⁴⁾

Thus, there emerges a possible alternative explanation for the stratigraphic evidence from these sites, namely that the Wei River Yang-shao wares of the lower strata may represent a style linked to a relatively early stage in the development of the Ma-chia-yao tradition, while the pottery remains from the upper strata may belong to the final Ma-chia-yao phases. Therefore, although the stratigraphy at these sites would seem to offer certain proof that the Wei River Yang-shao precedes the late phases of the Ma-chia-yao tradition, it does not necessarily lead to the conclusion that Ma-chia-yao evolves from Miao-ti-kou. Nor is that conclusion necessitated by the available radio-carbon dates for the Kansu Yang-shao finds from the Wei River (ZK 186) 3813 ± 175 B.C., ascertained for the Shih-ling-hsia level at Hui-ti-erh, Wu-shan,¹⁵⁾ and for the Yang-shao level at Miao-ti-kou (ZK 110) 3910 ± 125 B.C.,¹⁶⁾ since the periods encompassed by these dates overlap in time, which equally allows for the possibility that the Wei River style may antedate Miao-ti-kou.

The chief implication overlooked in an uncritical acceptance of the Ma-yü and Wei River stratigraphy is that it would concomitantly require an explanation of how, from a stylistic point of view, the Ma-chia-yao pottery could be seen to have evolved from the Wei River or Chung-yüan traditions. No scholars who have set out to outline such a development have done so in a convincing manner.¹⁷⁾ On the other hand, it is my own conviction that an unbroken evolution of painted pottery designs and forms can be reconstructed successfully if the inverse argument is applied and one attempts to trace a development from Kansu to the Central Plains, albeit such an effort would appear to fly most dangerously in the face of current interpretations.

Ultimately, the proof that Ma-chia-yao does not derive from the Chung-yüan is possible only by offering convincing evidence that its origins may be accounted for in some other fashion. I shall suggest that the Ma-chia-yao pottery developed from a secondary, or proto-Ma-chia-yao phase, whose origins can be traced from a specific stage in the evolution of the Pan-shan tradition; that it progressed through a number of logical and clearly recognizable stages of development, in the course of which it came into contact with pre-existing pottery cultures in the Wei River valley; and that it was along this already well-trodden route that the

Ma-chia-yao designs travelled, ultimately to serve as the inspiration for the Chung-yüan Miao-ti-kou painted designs.

What I believe to constitute the earliest proto-Ma-chia-yao style (proto-Ma-chia-yao I) is formulated on the basis of a number of vessels, all acquired by Andersson, which have never been satisfactorily classified (Figures 47–49, 52–53, 56–60). To these may be added one recently excavated from Hua-chai-tzu near Lanchou (Figure 55). These vessels bear a distinct relationship to Pan-shan, but because of certain characteristic aberrations in shape and design, they do not fit comfortably into that tradition. The amphorae are usually smaller than their Pan-shan counterparts, averaging between approximately 20–25 cm. in height, while their mantels, both more narrow and more level, are set off at a sharp angle from the lower portion of the vessel, which, in turn is less elongated. The necks, furthermore, are proportionately both broader and taller, and, again unlike Pan-shan, have either everted or rolled down rims and no ears. On the whole they have a sturdier and more prosaic look to them.

The designs, too, while close to Pan-shan, yet exhibit considerable deviations. Most apparent is the almost total absence of the dentate pattern, which is the hallmark of Pan-shan ware. The décor is also organized in a somewhat different way: around the base of the neck is always found a series of narrow circumferential lines, and these, in conjunction with the broad band beneath the edge of the mantel, leave only a relatively narrow and cramped register on the mantel open for the primary designs. Beneath the mantel another series of circumferential bands is usually drawn, either straight or wavy or the two in conjunction.

The designs on the mantels comprise a restricted set of patterns, each of which may be seen to have its prototype in Pan-shan. One such pattern (Figure 47) consists of a series of concentric rainbow-like arcs executed in red lines with thin black lines between them. The Pan-shan predecessor to this design is afforded by our Figure 11. Two of the proto-Ma-chia-yao vessels bearing this décor show other close affinities to Pan-shan: in one case a dentate pattern decorates the neck (Figure 47); in the other (Figure 48), one of the black lines on the mantel still bears a dentate fringe. A fragment of another vessel bearing such a design in red and black, known from the site of Chu-chia-chai (Figure 49), is further removed from the Pan-shan prototype in so far as dentations are absent, both from the primary design and from the neck. At least two other complete proto-Ma-chia-yao vessels exhibit this design in progressively more advanced stages (Figures 50, 51). In both instances the décor is executed exclusively in black, and the necks are decorated with simple circumferential bands.

Still another design found on vessels of this group, again with antecedents at Pan-shan" is the series of wavy lines painted in red and black (Figure 52). But of greater significance are the several proto-Ma-chia-yao vessels on which occur designs of flattened ovals filled with trellis patterns and bordered by red and black

arcs (Figures 53, 54). The interstices between these motifs are filled with zigzag lines in reserve, or, in one case, with a vertical row of chevrons. These curious patterns can best be accounted for by the trellis-filled gourd designs of Pan-shan (Figures 8–10). Here, however, the gourds have, as it were, had their tops and bottoms sliced off to fit the narrow band allotted them.

On the other hand, the decorative schema that without doubt was to be of greatest moment to the succeeding development of the Ma-chia-yao tradition is the spiral. Typical Pan-shan running spirals in red paralleled by black lines appear on these proto-Ma-chia-yao vessels (Figures 55–56); yet when seen on the amphorae they are far more cramped and consequently much less dynamic than on their Pan-shan forerunners, and the black lines are without dentations. Spirals of a similar character are also found to decorate the interior surface of certain deep bowls with narrow everted rims (Figure 57). From the earliest stages Pan-shan artisans ornamented the interiors of their bowls, and it is to be presumed that it was they who first transferred the spiral motif to the bowl. This innovation later was to be of no small significance to the Ma-chia-yao tradition.

In order to clarify further the relationship between this early proto-Ma-chia-yao style and the Pan-shan tradition, we need to single out, if possible, one particular phase of Pan-shan as a point of departure for this style. It is evident from the complex repertory of designs and from the use of rows of dentations on the necks of many of the proto-Ma-chia-yao I vessels that they do not derive from Pan-shan Style One. The large dentations of triangular formation occur plentifully in Pan-shan Style Two, but they are not encountered in Style Three or later, during which phases these dentations have curved outlines and take on the appearance of scallops. Again, the straight-sided and relatively broad necks of the early proto-Ma-chia-yao vessels are similar to those of Pan-shan Style Two, but not to those of Style Three, on which the necks tend to be both shorter and broader. Nor are the designs related to those on Pan-shan vessels of Style Three or later, in which the black lines come to exceed the red ones in width. On the proto-Ma-chia-yao I vessels discussed above, the black lines are either narrower or equal in width to the red ones. The concentric arc and wavy line décor are present on Pan-shan Style Two vessels, but there is little evidence of their appearance on later Pan-shan wares. Thus it seems probable that this early proto-Ma-chia-yao style developed from Pan-shan Style Two, and not from any other. If this is so, then the incipience of the Ma-chia-yao tradition took place long before Pan-shan had reached its maturity, and thereafter for a considerable span of time the two traditions must have coexisted.

There is evidence to suggest that the proto-Ma-chia-yao I style may have originated in the Lanchou area and to the northwest along the Hsi-ning-ho. Although the complete vessels of this type in the Stockholm Museum were acquired by Andersson in Lanchou, and their provenance is therefore obscured, it is nonetheless reasonable to assume that some of these vessels were unearthed

in that general vicinity.¹⁹⁾ On the other hand there are substantial indications that this style was practiced at one specific site. While it is not apparent from Andersson's publication of selected material from the Chu-chia-chai site in Hsi-ning-hsien,²⁰⁾ an examination of the vast number of unpublished sherds from this site stored in the Museum of Far Eastern Antiquities reveals a large proportion of these sherds to belong precisely to this early proto-Ma-chia-yao type. Among them are innumerable sherds from bowls (Figures 58–60), their interiors painted with spirals in red and black. Doubtless this site, from which also came various sherds of Style Two Pan-shan vessels,²¹⁾ was at least one of the areas that witnessed the birth of the Ma-chia-yao tradition.

In the course of a second phase of the proto-Ma-chia-yao ware the red pigment was eliminated from the designs, allowing for new and significant changes in the construction of the spirals — changes which directly anticipate the emergence of the Ma-chia-yao style as we know it. So long as the principal spiral designs were executed in red, the black lines used to fill the remaining space could at best run parallel to the red line of the spiral. The black patterns, accordingly, remained a distinctly secondary element, always separate from the design in red. Should there have been an attempt to join the black lines to the red, the juncture would have appeared as an unsightly brownish patch. Thus, as long as the red was employed there was a primary pattern and a separate 'filler', related to the other only in so far as it was parallel or concentric to it. At some point in the development of the proto-Ma-chia-yao style, whether for the sake of expediency or for aesthetic considerations, the red was eliminated. This radical innovation, with the design changes latent within it, was the single most significant step allowing for the subsequent event of the Ma-chia-yao style.

An examination of a bowl painted exclusively in black pigment (Figure 61) reveals that the spiral was executed initially in the same way as on the bowls of the earliest proto-Ma-chia-yao style; three circles were drawn on the interior sides of the bowl, equidistant from each other and connected by broad, straight lines reaching from the lowermost part of one circle to the top of the next in counterclockwise order. Here, however, the narrow lines drawn parallel to the connecting arms no longer terminate near the nucleus, turning back at an acute angle, but instead run directly to the black nucleus. Thus is created a spiral with more than two arms; and with it the possibility of a radial, rather than a running spiral comes into being. It is noteworthy also that here the triangle formed at the bottom of the bowl in the early stage (Figure 57), is replaced by a circle, allowing for the possibility, not yet realized, of connecting rotary arms from each of the peripheral circles to the central one, which would for the first time involve the entire painted surface in spiraling movement. Although of the same soft, almost powdery pinkish-tan ware, this bowl differs from the proto-Ma-chia-yao I bowl (Figure 57) in that the contracted straight-sided neck has been eliminated and the rim is slightly broader.

The amphorae of the proto-Ma-chia-yao II phase (Figures 62–64) are of two varieties. The first and older one, exemplified by a specimen from Hua-chai-tzu (Figure 62), is closely comparable to the type characteristic of proto-Ma-chia-yao I (Figures 52–56). The second variety continues to exhibit certain features which have been noted in the first phase: the base of the neck is circumscribed by thin lines and the designs on the mantel are restricted to a narrow frieze. Different, however, are the greater roundness of the vessel, the slightly curved profile of the neck and the more gradual manner in which it emerges from the body.

On these three vessels, the area below the mantel is given over to the primary design — a spiral composed of six large nuclei running clockwise around the vessel. The spiral is essentially of the same type as those seen on the interior of the black-painted bowls: it is constructed of a series of circular nuclei connected by lines running from the top of one nucleus, around and beneath it and upward to the top of the next nucleus to the left. An additional line, parallel to the first and joining the nucleus, is drawn from below the spiral. This second line touches the boundary lines beneath the design and gives the effect of anchoring the spiral, adding a vertical tension to the otherwise strongly lateral movement. The interstices above the spirals are here filled with triangular wedges reminiscent of Pan-shan Style Two conventions (Figure 5).

The third amphora, in the collection of the Peabody Museum, Harvard University (Figure 64), clearly stems from this second phase of proto-Ma-chia-yao. It is, however, slightly more advanced in type, in so far as the secondary motifs, except for the concentric lines at the base of the neck, have been eliminated, giving over the entire surface to the sweeping multi-armed spirals. The spirals on the Peabody vessel seem more assured, but they are still running, rather than radial spirals and are accordingly classified as proto-Ma-chia-yao. This vessel, subjected to a thermoluminescence test carried out by the Museum of Fine Arts, Boston, Department of Conservation, is dated within the range of 3900-3600 B.C.

The proto-Ma-chia-yao II style is characterized by vessels upon which all painting is done in relatively wide black lines and on which the spirals now have secondary arms. That the above-mentioned bowl and amphorae are not idiosyncratic types but representative examples of a new style is manifest not only by a large number of sherds painted in this scheme (for example, Figures 65, 66), but by the presence of other types of vessels and by at least one other painted design, which continue, with slight alterations, from the earlier style. To this second phase belong various small jugs with straight necks and rounded or everted rims (Figure 70, right and left). In keeping with the first phase, the necks are decorated with a row of chevrons or with broad circumferential bands; around the base of the neck is a band of narrow circumferential lines. The principal décor on these vessels consists of a row of black hemispheres with a series of thin vertical lines at the center of each pair. This design surely is best

explained as an abbreviation of the gourd-derived designs on the first phase vessels (Figures 53, 55). The use of the abbreviated gourd motif on the mantel of the spiral amphorae as well as on the smaller vessels permits us to group these vessels together and hence to enlarge our comprehension of the repertory of vessel forms available at that period.

At least one vessel (Figure 62) belonging to the proto-Ma-chia-yao II phase has as its provenance the Lanchou area. Although it is quite possible that vessels in this style were produced near Lanchou, there is again one site — Chu-chia-chai — where the second, as well as the first, proto-Ma-chia-yao style is extensively represented. The important painted bowl (Figure 61), as well as numerous sherds of bowls with painted interiors and sherds of amphorae bearing large spiral designs on their sides are discoveries coming from this site (Figures 66–67).

Closely connected with the proto-Ma-chia-yao II tradition are also a series of sherds, all from Chu-chia-chai, which differ from the others in that numerous thin lines appear in conjunction with the usual broader ones (for example, Figure 68). These sherds represent exclusively parts of bowls painted on the interior, many with a circular nucleus and other lines joining it in such a way as to suggest a spiral design. The ware of these sherds and the quality of the paint are exactly in keeping with the rest of the material constituting this phase. Designs on the other sherds from Chu-chia-chai (Figure 69) suggest that no spirals were involved but only broad lines adjacent to and paralleling a series of thin ones. Although from the material available a reconstruction of the designs on these bowls is impossible, they most probably were not unlike the décor seen on the small cup of Figure 72; on a bowl with an upward projecting 'panhandle' (Figure 73); and on the long-necked flask with low belly and shallow base (Figure 71), which show as their decoration broad vertical bands alternating with sets of fine lines. The broad undulating line circumscribing the base of the vase and the segments filled with a series of narrow concentric arcs were possibly inspired by the wavy lines frequently used as the lowermost border on Pan-shan designs and retained on some early proto-Ma-chia-yao examples (Figures 47, 53). Both this undulating line bordered by fine curved lines and the use of fine lines alternating with broad ones to form the arms of the spirals were innovations later incorporated in the first mature Ma-chia-yao style.

Two other vessels, both excavated from the Lanchou area in more recent times, are also worthy of note. The first, a small jar with a round body and a neck of concave profile (Figure 74) is comparable in the treatment of its form and in its spiral décor to the two amphorae representative of this style (Figures 63, 64), but it is more advanced than either of the two jars previously mentioned (Figure 70, left and right) and would seem to belong late within this phase. The well-known tazza, included in the Chinese Exhibition of 1973–1975, on the other hand, because of the more eloquent handling of the spiral on its interior surface and the decoration on the exterior composed of broad and fine lines in combination,

appears to be the latest in our sequence and stands as a piece transitional between this and the following style (Figure 75).

Yet with the possible exception of the tazza, were these vessels, and indeed those of the entire proto-Ma-chia-yao period, not the harbingers of things to come, they would in themselves seem of little moment, especially by contrast to the Pan-shan vessels from which they derive; for the most part their importance derives from new conceptions in design, rather than from any pronounced artistic merit.

The primary criterion for the definition of the first major Ma-chia-yao style — the earliest ware in this Kansu tradition which forms a distinct set among the finds from Ma-chia-yao itself — by which it can be distinguished from the proto-Ma-chia-yao style and all other Kansu pottery traditions, is given by the emergence of the true radial spiral, the dominant motif in the evolution of the Ma-chia-yao tradition almost until its conclusion (Figure 76). Apart from the multi-armed radial spiral, Ma-chia-yao Style One is specifically marked by two other features. Notable is the use of a series of narrow lines in conjunction with broader ribbon-like bands that contract and swell in an elegantly rhythmic fashion. The combination of broad lines and clusters of narrow ones, as well as the tendency for the broad ones to fluctuate in width, is a feature engendered from tendencies that became evident in the later proto-Ma-chia-yao style. Secondly, the nuclei of the spirals are often especially large, somewhat oval and frequently filled with additional geometric or zoomorphic designs.

The ware of which these vessels are fashioned is noticeably harder and the surface less powdery than in the proto-Ma-chia-yao examples. Normally it is of the straw-colored hue typical of much of the subsequent Ma-chia-yao ware. The paint, a charcoal black, is of a smoother consistency than before.

At present, Ma-chia-yao Style One may be exemplified by perhaps only two vessels that are complete, an amphora (Figure 76) and one small vase (Figure 77). With its more slender proportions, its high mantel and tall cylindrical neck, the amphora presents a far more graceful silhouette than those seen before. The neck is decorated with three broad bands, a feature retained from the previous style. Moreover, a series of thin lines is still inscribed around the base of the neck. The spiral, however, has moved upward so that it covers the mantel and only a small area beneath it.

The spiral pattern itself has undergone major changes. It is composed of four equidistant large nuclei on the mantel, with an 'implied' fifth, central nucleus constituted by the base of the neck. The nuclei on the mantel are connected by broad diagonal black bands running upward from the the base of one nucleus and leftwards to the top of the next. The fifth nucleus is connected to each of the others by pairs of broad lines, widening and contracting, with four narrow lines between them; they unwind from the neck in clockwise order and join each of the other four nuclei from above. Similar pairs of broad lines with narrow ones

between them descend from the right of each of the four nuclei to the lower border; the broad line attached to the left side of the nucleus extends diagonally across the lower part of the mantel, echoing the diagonal arm joining the neck to the other four nuclei. The spirals on the mantel are thus anchored vertically as well as linked horizontally, while the presence of the upper radial arms creates the effect of the entire design unraveling from the neck. The design has gained tremendously in dynamism, and for the first time the entire upper part of the vessel becomes integrally involved in spiraling movement.

The headless toads or frogs that fill the four nuclei are equally curve-sided, their dark bodies harmonizing with the heavier lines of the spiral design, and their fringed feet, with the fine lines of the décor. The design on this vessel, in its consummate perfection, embodies a complex structure in which each element is resolved. In spite of its technical imperfections (it was dented on one side during firing), it stands forth as one of the preeminent masterpieces of Chinese neolithic pottery.

Evidently the large oval nucleus embellished with a separate motif seen on the Stockholm amphora was a standard feature of this style. On other fragments of amphorae of the same period (Figures 78–80) we find for the most part purely geometric motifs composed of diagonally oriented crosses. The two diametrically opposed quadrants are filled in black to form triangles with one curved side, so that these designs too are in harmony with the curving and widening forms of the broader spiral arms. Within the spiral nuclei of vessels belonging to the previous style (Figure 64) only the most simple cross marks are found, and zoomorphic designs are absent. By contrast, the zoomorphic motif is a typical characteristic of Style One, as shown, not only by the amphora of Figure 76, but also by the frogs swimming around the body of a smaller vessel (Figure 77). In addition, anthropomorphic designs occur on several amphorae clearly belonging to this period. The neck of one such vessel (Figures 81, 82) is accentuated by three projecting half-disks, one serving as the nose and the other two as the ears of a human face. The eyes are marked by circular dots with a pair of arcs inscribed above them. Other instances of anthropomorphic motifs are known from subsequent Ma-chia-yao styles (e.g., Figure 89), but unlike the zoomorphic motifs, they are very rare.²²)

Vessels of this stylistic group come from a fairly wide range of sites. There is no evidence that the workshops at Chu-chia-chai, which witnessed the development of the proto-Mao-chia-yao styles, lasted long enough to participate in these developments. On the other hand, sherds belonging to this style are found not only at Ma-chia-yao but also in the general Lanchou area. One may suppose that during this period, the Ma-chia-yao industry was located principally in the Lin-t'ao/Lanchou area.

The Second Ma-chia-yao Style can be reconstructed on the basis only of a handful of sherds (Figures 84–88) unearthed at Ma-chia-yao and by one small

vase acquired by Andersson in Lanchou (Figure 83), and it may have been of short duration. It is distinguished principally by two features. First, the use of broad lines rhythmically fluctuating in width in conjunction with clusters of contrasting fine lines typical of Style One gives way to lines of a uniformly medium width. These lines, each of which connects with and serves as a spiral arm linking one nucleus to another, while being no more numerous than in the preceding style, are now spaced evenly over the surface. Secondly, the spiral nucleus is inevitably round and small, and within it for the first time appears the central dot, a feature which recurs regularly in the nuclei of nearly all the subsequent Ma-chia-yao designs. The sense of deliberation and extraordinary discipline of the first Ma-chia-yao style is replaced by a slightly more formulaic approach to the designs and by a concomitant ease of execution. The painting suggests a calligraphic rapidity unprecedented in the earlier styles, and the spiral designs themselves have taken on a distinctly quickened sense of movement.

Because the spiral arms are comparatively wide and continue to fluctuate slightly in width, the design on the small jar of Figure 83 marks this vessel as the earliest of our examples of Style Two. We note, however, that the interstices between the spiral arms are filled by the graceful configurations of segmental triangles which are painted black, while the far more eloquent shape of this vessel is readily appreciated when it is contrasted to its proto-Ma-chia-yao forerunner (Figure 74).

The shapes of other vessels of this style are difficult to ascertain. Some clues, however, are afforded by a set of sherds which, when reconstructed, form part of the mantel of an amphora, that would appear to have approximately the same shape as in the foregoing style (Figure 84). The painted decoration is similarly banded underneath by a series of circumferential horizontal lines, while the spiral itself again would seem to unwind from the lines around the base of the neck. In regard to the substance and color of the ware, the burnishing of the surface and the color of the pigment, there is little to distinguish this vessel, and the many sherds presumably belonging to vessels of similar shape (Figures 85, 86), from the amphora of Figure 76. The difference here lies entirely with the spiral design itself.

This particular type of spiral design is also found to decorate the interior surface of bowls, of which there are many partial specimens (Figures 87, 88). These bowls are shallow and lack everted rims and both these characteristics differentiate them markedly from earlier examples. In each case the design is composed of a number of nuclei (probably three or four), each with a central dot, placed close to the rim and one nucleus at the center of the bowl. The many spiral arms connect each of the nuclei on the side walls to each other and to the nucleus in the center in such a way that the clusters of arms occupy the whole surface. The curve-sided triangular interstices, which had previously bordered the spirals, have, as a consequence, diminished in size, and, as in the case of the small jar,

they are now painted in black, rather than being left in reserve.

The most telling difference between the Third Style (Figures 89–102) and the foregoing one is that each of the interstices between the various series of spiral arms now contains a separate 'filler nucleus', each with a central dot. The areas between the spiral arms and this filler nucleus are painted in black, so that the filler nucleus is, as it were, cusped by three small segmental triangles. The addition of the nuclei to the interstices brings an added emphasis to the symmetry of the design, particularly in the case of bowls employing the radial spiral composed of a central nucleus and three additional nuclei on the sides, where the filler nuclei of necessity form the apexes of an implied equilateral triangle (Figures 89, 90). The additional nuclei have the further effect of compressing the clusters of spiral arms into more markedly separate units, whereby the radial structure of the spiral comes to be more clearly articulated. The stress here, however, is perhaps less upon the spiral as such, than upon the unravelling of the clusters of lines themselves.

During the early stage of Style Three the lines are narrower than before, somewhat dry in character, and at times uneven, owing primarily to imperfections in the surface. The net effect of the large and numerous nuclei and the thinness of the lineaments are light designs of a relatively open and airy character.

This same effect is equally felt in designs of a non-spiral type. The amphora decorated with concentric arcs, a décor reminiscent of the proto-Ma-chia-yao styles (Figure 93), is a case in point. The decoration on the interiors of the large bowls (Figures 94–96), when based on the principle of concentric circles, utilizes the same turned-back hooks as appear on the amphora (Figure 93) and exhibits the same openness, at times accentuated by dots that float free and playfully on the surface. In all, the designs of this style show not only the rigorous adherence to symmetry, characteristic of the Ma-chia-yao tradition since its inception, but also an overwhelming absorption in the multiple repetition of circular or curving lines.

The ware typical of the Third Style is of the same hard, straw-colored variety as in the preceding style, and the paint is of the same pure black. A sufficient number of complete vessels and large fragments constitute a substantial typology. The amphora (Figure 92) apparently had a relatively high, sloping mantel, clearly set off from the tapering lower part of the body. The neck would have been cylindrical; the mouth flares more strongly than before (Figure 91). The rimless bowl is present (Figure 89) and in one instance carries a short flat handle reminiscent of that on the proto-Ma-chia-yao bowl of Figure 73. The handle is designed as a human head with three crude circles representing eyes and mouth; serrate ears project from the sides and upper surface, signifying, respectively, ears and nose. The decoration, thus, seems as archaic as the shape of the handle, in this case recalling the anthropomorphic designs on the Style One amphora (Figures 81, 82). The second type of bowl, with deeper body, gently curved in

profile, has a gracefully everted, wide rim with a slightly convex upper surface (Figure 94).

As the Third Style progresses to its maturity, the décor, executed in even and unfaltering strokes, attains an air of ease and perfection previously not known. The shapes of these vessels also attest to an unheralded level of achievement, as in the case of the jar of Figure 98, discovered at Lanchou in 1973, whose refinement is immediately revealed by a comparison to its Style Two predecessor (Figure 83). There also appear at this stage vessel forms that seem entirely new. One of these, ornamented almost the entire length of its body by radial spirals in vertical as well as horizontal series, is a water container, surmounted by a conical neck and flaring rim, that tapers from the shoulders downward to a pointed bottom (Figure 99). The pointed bottom water vessel (*p'ing*) is rare in Kansu, but the form is one of the most common throughout the Chung-yüan area, and almost certainly originated there; this particular specimen therefore is nearly certain proof of contact during this period between Ma-chia-yao and people linked to the Chung-yüan, although it stands as the only example with painted decoration in either region. Another vessel form to make its entry late during this phase is the elegant large jar with smoothly tapering sides and a broad mouth and everted rim, but its occurrence is less readily explainable (Figure 100).

Finally, unearthed from a Ma-chia-yao burial at Wang-pao-pao-ch'eng near Lanchou in 1966 are several vessels that can add still further to our awareness of the variety of the forms and designs of Style Three in the later phases of its development. An unostentatious but nonetheless finely shaped squat jar is provided with four unpainted hooks projecting from its shoulder which assumedly served in fastening the lid securely to the vessel (Figure 102). The lid itself bears a painted design that reflects the 'shortened gourds' seen much earlier on proto-Ma-chia-yao II vessels (Figure 70). The large bowl from the same find (Figure 101) is remarkable for the many clusters of fine spiral arms which spin off from a central disk that itself exhibits a pattern reminiscent of ones sometimes employed within the large spiral nuclei of Style One vessels (Figures 78–80).

It is perhaps ironic that the Fourth Style, which marks the florescence of the Ma-chia-yao tradition, is known to us almost exclusively from fragments (Figures 103–111). The ware is of a perfection unequalled among Kansu pottery types, hard and fine, the surface flawless and entirely smooth. Normally it is of the same straw-colored hue as before, although upon rare occasions the surface has turned salmon-pink, owing presumably to higher kiln temperatures. The paint now tends to have a slightly brownish tone that adds an overall effect of warmth and harmonizes more perfectly with the color of the the ware than did the starker charcoal-black of previous styles. The paint in broader strokes of a freer calligraphic touch flows across the surface with a smoothness and richness never before achieved.²³⁾

The amphora seems for the most part to resemble closely that of the previous

style (Figure 105), save that the tall neck is faintly concave in profile and set off by a crisp broad rim (Figure 104). A second, more gracefully slender type of amphora, also occurs in this period (Figure 103), and would seem to be particularly characteristic of this style. While there is little evidence available to instruct us as to how the shallow rimless bowls looked then, the large bowls (Figures 108, 110) are superlatively potted and exhibit an even bolder, broader rim.

The key to distinguishing the Style Four designs from those of Style Three lies with the treatment of the 'filler nucleus.' No longer is it drawn large and clasped by three small triangles; instead, the interstices are taken up by a single large segmental triangle, into which is inserted a small nucleus with its central dot. The area within the triangle, around the nucleus, is painted black, so that the nucleus with its proportionately larger dot now shows forth as a light ring in a darker field. This innovation in the handling of the interstices is not so much a matter of technical expediency, slight in any case, as an artistic solution. For now the filler nuclei are clearly subordinate to, no longer contending with, the primary spiral nuclei; and the potential of the segmental triangle, a configuration elegant in its own right, is finally realized. The smooth rich lines, and the greater space given to the segmental triangles result in a tightening of the whole design, which becomes both richly dense and darker in appearance.

In a way anticipated by the previous style, the spiral itself, while retaining its compelling magic, is by now a well entrenched habit and to some degree is less in the focus of artistic intent than the sheer lineament itself. The controlled organization of the spiral is somewhat to be taken for granted, while the relative merit of the design is to be measured primarily by the calligraphic quality of the line. The absorption in the calligraphic quality of the line as such can best be assessed by the remains of bowls and amphorae where the spiral has altogether been laid aside, and in its stead are designs composed exclusively of evenly spaced lines in multiple parallel sequence (Figures 109–111). The lineament seen on these vessels is of an expressive elegance unequalled on any other Chinese ware.

That the great height in the ceramic production of the Ma-chia-yao culture — not unreasonably — coincided with the height of the influence of this civilization would explain the distribution of the Style Three and Style Four ware, which ranges from Lo-han-t'ang, Hsi-ning-hsien²⁴) in the northwest, to Li-hsien and Min-ch'uan-hsien in Ssuchuan²⁵) and to Ching-ning-hsien in eastern Kansu²⁶) — a distance of nearly 800 kilometers on a north-south axis and 400 kilometers on an east-west axis. Whether Ma-chia-yao people came to inhabit such remote regions, whether their craftsmen were sent over such vast distances to establish kilns, or whether the finds represent the result of trade cannot yet be determined. Nevertheless these distant sites give voice to the extraordinary importance of the Ma-chia-yao culture in Western China at this time. Nor is there any indication

that its range of influence was ever so great at any time before and after.

The Fifth Ma-chia-yao Style (Figures 112–120), known through sherds from Ma-chia-yao and Hsi-p'o-kua in the vicinity of Lanchou, and by one complete vessel excavated at San-p'ing in Lin-hsia-hsien (Figure 116)²⁷) displays significant changes in the type of ware and in the designs and vessel forms. The ware characteristic of this style is more heavily potted than that of previous styles, and clearly shows that a fast wheel was used at least in turning the rims of amphorae (Figures 117–119). The ware is also of exceptional hardness and the outer surface so smooth as to be without the slightest unevenness or blemish; and while it normally remains sand-colored on the outside, the core of the ware is often of a pinkish or salmon-colored tinge. There are, moreover, vessels where even the surface is of the same agreeable salmon color. (Figure 112 is an example.) Seemingly these vessels were fired at a higher kiln temperature than earlier wares, and this innovation, along with the introduction of the fast wheel attest to a new level of technical proficiency.

While still based upon the schemata established for the radial spiral, the Style Five designs exhibit the use of concentric circles within the nuclei as a matter of course (Figures 112, 113, 115, 116); in the foregoing style, that device had appeared only in a tentative way. The radial arms are reduced in number and are stronger and bolder than before; the black segmental triangles begin to take on a renewed importance, becoming larger, more independent and lively and almost joyous shapes (Figures 113, 114). In so far as one or more of their extremities remain unattached to the nucleus, it can be determined that they were inscribed separately from the spiral and its arms, not merely as a matter of filling in the areas left open after the spirals were drawn. The technique of inscribing these designs has thus become altogether more abstract in conception.

For the first time too one finds the use of additional dots throughout the design, sometimes terminating lines which do not join with others, sometimes marking the intersection of lines (Figures 113, 116), and sometimes as the 'heads' of symmetrically arranged but free-floating lines (Figures 116, 119). Similar unattached lines ending in dots are also earlier seen on the magnificent large bowl decorated by a big goggle-eyed turtle, where they play a special role (Figure 97). On the Style Five vessels are to be noted, as well, instances of fin-like spikes added to some of the secondary lines in the design (Figures 116, 120). Also unprecedented is the sudden appearance of the convolute spiral (Figures 114, 120) — the first instance of a spiral without nucleus — whose invention was no doubt anticipated by the use of nuclei filled with concentric circles.

From the point of view of shape, the vessel that has changed the least is the small, shallow, rimless bowl (Figure 112). The larger bowl (Figures 113–115) is now deeper and occasionally its form has been altered so that the lower portion has become faintly concave in profile. The rims are considerably heavier and broader, measuring as much as an average of 2 cm wide and 0.5 cm thick. The tall,

slender vase (Figure 120), exhibits a rim heavily potted and strongly outturned. The tall jar with broad mouth is available to us in the splendid example from Linhsia (Figure 116). By comparison to the equivalent jar from Style Three (Figure 100), the shoulder is lower and the broad mantel slopes away from the mouth at a gradual angle. The mouth lacks an everted rim but is surrounded instead by four hook-like projections, presumably intended for the attachment of a lid. The handles are placed low on the vessel, and the body tapers evenly to the base, which in diameter is equal to the opening of the mouth.

The overall aspects of Style Five are expressed by vessels more monumental but less delicate in their form, and in designs more controlled and more suave, masterfully executed and conceptually inventive, but occasionally lacking the freshness and calligraphic lightness of those that preceded them.

With the advent of Style Six (Figures 121–127) the sense of elegance diminishes, and we have to do with a somewhat ponderous and mannered style. The convolute spiral becomes dominant, but it has acquired pairs of arms of the running spiral type (Figures 121, 123). The usually arc-shaped areas between the outlines of each pair of arms are filled with a trellis pattern, which is the other chief characteristic of this style. Whatever merit might have accrued from the use of designs in which a contrast of 'texture' came into play is largely nullified by the placement of the trellis, whereby the spiral becomes overburdened and obscured. With the addition of the trellis and the generally heavy-handed and inarticulate outlining, the movement of the spiral tends to become somewhat turgid.

The ware itself is almost undistinguishable from that of the previous style, being again particularly thick and solid. Most of it is straw-colored on the surface and salmon pink at the core. Rims continue to exhibit the unmistakable traces of a fast wheel. A slip, most often of a limestone-like white, is not infrequent. The shapes of the bowls (Figures 121, 122, 125) have remained essentially the same, save that the rims of the large bowls are ever broader and thicker. And, for the first time in the history of the Ma-chia-yao, the interiors of the large bowls are left unpainted. The amphora (Figure 123) seems to be full-bodied and the neck, no longer set off sharply from the body, moves slowly upwards to a heavy, flaring mouth. The décor of the neck is also different; in addition to the usual striations there are double rows of scallops. The tall, slender vase, comparable in shape to Figure 120 is available in a fine specimen excavated from Pi-yü, T'ung-wei-hsien, published only recently (Figure 127). No tall broad-mouthed jars are known, but at this period there appears for the first time a small pear-shaped jar with a short neck of concave profile (Figure 124).

Although these wares evince considerable technical mastery, the heavy potting nonetheless contributes to the somewhat stolid effect of the style in general. Still, it shows other redeeming features. Some designs, for instance, that are only indirectly based upon the spiral are of particular interest, as is the increasing independence of the segmental triangle. Often, especially on the outer

surfaces of the large bowls (Figures 122, 125), sizable trellis-filled ovals replace the concentric or convolute spiral. These ovals are connected by one or two diagonal arms running from the bottom of one oval to the top of the next. Segmental triangles with narrow 'bodies' and greatly extended arms are drawn above and below this diagonal so that one arm of each is parallel to the diagonal, one follows the curve of the oval and the third arcs above the lower border (or under the upper border) leaving, between itself and the border, a roughly hemispherical area in reserve. In most instances, however, it would seem that the entire design is formed on the basis of these segmental triangles themselves, whereby it is not until after the segmental triangles are inscribed that the ovals which they border are painted in. It is this difference in the method of constructing the design that may account for some of the trellis-filled ovals being pointed at the top and bottom where they meet the extended arms of the segmental triangles. One additional feature of these particular designs is the presence of triangular spikes projecting from some of the lines, which are now more prominent than before (compare Figures 126, 127 and Figure 116).

The last Ma-chia-yao style that I wish to discuss (Figures 129, 130, 132, 136–141) is puzzling and complex in many respects. This style is the one represented by the lower level at Ma-yü. It is also widely represented in the Wei River area, and in recent literature it is often designated as the 'Shih-ling-hsia' style, after the site in Wu-shan-hsien.²⁰) Although one of the primary features of this style is the unprecedented, striking deep red color of much of the ware, and despite both the fact that the designs never employ secondary nuclei and the tendency for the decoration to be separated into two registers — one filled by a spiral, the other by large circles subdivided vertically and connected by diagonal arms and segmental triangles — this style is doubtless intimately related to the Ma-chia-yao tradition, to which its designs and most of its forms show an unmistakable affinity.

Moreover, many features of this style convince us that it may have originated relatively early in terms of the overall development of the Ma-chia-yao tradition. In so far as the designs never include concentric circles, they cannot be linked to Style Five, where that design was dominant. Nor do they ever employ the convolute spiral of Style Six. Furthermore, although some of the vessels appear to have been finished by the use of a wheel, none are so refined nor so advanced in technique as those of Style Five (compare Figures 129, 117–119). The general character of the lineament and of the paint itself, which is thinly applied and has a tendency to turn slightly bluish, indicates instead that these wares are most closely affiliated with Styles Three and Four.

It is inconceivable that the designs on these particular vessels were produced by anyone not already deeply familiar with the work of the Ma-chia-yao craft: men, and although their designs convey a sense of deliberation — as if they were being re-thought or thought out anew — they are by no means the work of novices. On the other hand, they exhibit sufficient deviation from the Ma-chia-

yao tradition to suggest that they form a separate style, one most likely developed not at Ma-chia-yao but by craftsmen in the Wei River area, where in recent years it has been excavated in quantity (Figures 133–135). It therefore is best designated as the Wei River Yang-shao style.

Apart from the red hue of the ware there are other curious features about this style. By and large the vessel types are in keeping with those of Ma-chia-yao: the shallow rimless bowl (Figures 137–138) and the larger and deeper rimmed bowl (Figure 136) are present. Yet there also occurs a new type of rim which is broad, but not everted; rather it is, as it were flattened to the side of the bowl (Figure 140). The amphora on the other hand, is surprisingly round in profile (Figures 130, 131) and has a neck strongly flaring toward the mouth (Figure 129). Moreover, just above the juncture of neck and mantel runs an appliqué band of clay impressed with double rows of diagonal dentations, worked so that they appear intertwined (Figures 130, 132). In addition we meet with small red ware necks (Figure 141), one of which has a slightly everted lip and a ridge around the center, while the other is curiously composed of a heavy, rounded ledge, contracting to a narrower mouth — features which again are unprecedented at Ma-chia-yao.

Behind the sudden appearance of these features we may suspect the influence of some other pottery tradition. Outside influence is even more forcefully suggested by the presence of red ware, cord-impressed, pointed-bottom water vessels²⁹⁾ — one of the most characteristic vessel forms of the Central Plains area, but which is rare in Kansu. For such outside influence we might look to one of two traditions: Miao-ti-kou or Pan-p'o. In so far as the stages of the Miao-ti-kou tradition presently known to us are apparently predicated on the design schemata of exactly the Wei River style, as it is known from Ma-chia-yao and the Wei River valley (see Chapter III), the aberrant forms at Ma-chia-yao could only have been inspired by some still unknown, and therefore entirely hypothetical, phase of Miao-ti-kou which might have existed prior to the Wei River style.

Looking, on the other hand to Pan-p'o, which, on the basis of recent radio-carbon tests, very likely had a long development in the Central Plains area prior to Miao-ti-kou,³⁰⁾ we actually find evidence for some of the same aberrant characteristics of the Wei River type vessels. The use of the dentated appliqué is frequent,³¹⁾ and there are numerous examples to be found of the small necks with raised bands around their center, or of necks with heavy ridges at the top contracting to a narrow mouth.³²⁾ The string-impressed pointed-bottom water jar is, of course, plentifully represented at Pan-p'o. As has been established by recent excavations, the Pan-p'o tradition extended at least as far west as Pao-chi on the Wei River in Shensi.³³⁾

Among the Pan-p'o material excavated at Pao-chi was found a small squat water jar with a baluster-like head; painted on the surface of this vessel is the outline of a dragon-like creature (Figure 143). Another vessel, a tall, flat-bottomed *p'ing* (Figure 142), its neck, keeping with Pan-p'o usage, decorated

with a cord-like appliqué band, and which bears on its side a large snake- or dragon-like creature executed in a manner closely similar to the Pao-chi water vessel, was excavated as far west as Kan-ku-hsien, and thus shows that the influence of the Pan-p'o tradition extended into the sphere of the Ma-chia-yao culture. Since it is also known that the Ma-chia-yao vessels had found their way into the Wei River area,³⁴) there is every likelihood that contact between these two cultures could have occurred, and that such contacts may account for some of the otherwise enigmatic features of the Wei River style.

In an effort to place the Ma-chia-yao tradition in time, we confront three relevant scientifically ascertained dates. The first (3900–3600 B. C.), obtained by thermoluminescence testing, carried out at the Museum of Fine Arts, Boston, Department of Conversation, and pertaining to a vessel of the proto-Ma-chia-yao period (Figure 64), may afford something close to a *terminus post quem* for the style as a whole. The second date (ZK 108) 3100 ± 190 B. C.³⁵) was obtained by the carbon-dating of charcoal found within a kiln at Ts'ao-chia-tsui, a terrace site near Lanchou. From within this kiln came sherds indisputably of Ma-chia-yao type. Although several sherds found in the immediate vicinity of the kiln are illustrated, only one bowl, unequivocally from the kiln itself is reproduced (Figure 128).³⁶) This bowl, in so far as it is lacking spiral decoration, is difficult to place stylistically with any perfect accuracy; yet the broad rim, the bold and somewhat careless painting enable us to classify it within the range of Style Five or Six. Furthermore, a high percentage of sherds discovered in the vicinity of the kiln are described as being red in color.³⁷) We may therefore conclude that the carbon-14 date for the Ts'ao-chia-tsui site applies specifically to the late phase of the Ma-chia-yao culture.

On the other hand, the single and comparatively early carbon-14 date of (ZK 186) 3813 ± 175 B. C. available for material associated with the 'Shih-ling-hsia' stratum at the Wei River site of Hui-ti-erh in Wu-shan-hsien,³⁸) as well as the stratigraphy at Ma-yü, which is repeated at Shih-ling-hsia, where the Wei River Style is overlaid by late Ma-chia-yao pottery,³⁹) suggests that the Ma-chia-yao tradition may have outlasted the Wei River style in both the Lanchou and Wei River areas.

Notes to Chapter II

- ¹⁾ J. Gunnar Andersson, *Children of the Yellow Earth*, p. 264.
- ²⁾ J. G. Andersson, *BMFEA*, 15 (1943), 88–89; Bo Sommarström, *BMFEA*, 28 (1956), 55.
- ³⁾ Chang Hsüeh-cheng, *KKTH* (1958/9), 38–41, 48.
- ⁴⁾ Shih Hsing-pang, *KK* (1962/6), 318; Chang Hsüeh-cheng, *KKHP* (1960/2), 13; Chang Kwang-chih, *Archaeology*, pp. 117–118; William Watson, *Early Chinese Civilization* (London, 1966), p. 37; Chêng Tê-k'un, *New Light on Prehistoric China*, p. 25.
- ⁵⁾ Andersson, *BMFEA*, 15 (1943), 97.
- ⁶⁾ Ludwig Bachhofer, *A Short History of Chinese Art* (New York, 1946), pp. 19–23. The possibility of Western influence is discussed at greater length in two articles by the same author, "Der Zug nach dem Osten," *Sinica* (Sonderausgabe, 1935), 101–128, and "Zur Frühgeschichte Chinas," *Die Welt als Geschichte*, Vol. III (1937), 256–279. Any assessment of the relationship between Yang-shao and Lung-shan ware with the pottery of the Ancient Near East and other geographical regions would now involve a complete re-evaluation of the problem in terms of scientifically dated specimens. The early dates now proclaimed for both the Yang-shao and Lung-shan stages, suggest that we can no longer rely on any foregone conclusion that either of these styles originated in the West. This entire matter, however, remains one for future consideration.
- ⁷⁾ Max Loehr, "Zur Ur- und Vorgeschichte Chinas," *Saeculum*, 3 (1952), 33–38, 43–44; idem, "China: Archaeology," *Encyclopaedia Britannica* (1956), Vol. V, pp. 514–518.
- ⁸⁾ Bachhofer, *A Short History of Chinese Art*, pp. 22–23; Loehr, "Zur Ur- und Vorgeschichte Chinas," 40–42; idem, *Relics of Ancient China from the Collection of Dr. Paul Singer* (New York, 1965), pp. 15–16. At the time of these publications no carbon-14 dates for Chinese neolithic material were yet available.
- ⁹⁾ Chang, *Archaeology*, (1968 edition), pp. 110–111; (1977 edition), pp. 117–118.
- ¹⁰⁾ In the original report the findings are stated with considerably more hesitation than in Chang's rendition. In a section of the report (Chang Hsüeh-cheng, *KKTH*, 1958/9, 39, 41) following that translated by Chang, it is said: "Apart from this, in the upper part there were a small number of pointed bottom vessel sherds, which are not objects that should be part of the culture that the upper part remains belong to, as a result of lower part remains being mixed into the upper part." Are we to assume that the stratified layers are not all that discrete or unadulterated? Moreover, the general conclusions are stated somewhat less definitively: "From this we come to the preliminary opinion: the upper part represents the remains of the so-called Kansu Yang-shao culture of the Ma-chia-yao stage; the lower represents Yang-shao culture remains. This stratified appearance of the cultural layer indicates that the Yang-shao culture is earlier than the Kansu Yang-shao Ma-chia-yao stage. At the same time, on the whole, it shows that the Yang-shao culture originated in the Chung-yüan (Shensi, Honan, Shansi) area and expanded." (*Ibid.*, p. 41.)
- ¹¹⁾ Chang, *Archaeology* (1968 ed.) pp. 85–87.
- ¹²⁾ *Ibid.*, p. 119; *Archaeology* (1977 ed.), p. 131.
- ¹³⁾ *WW* (1976/3), 24–30. After the publication of the 1962 excavation at Shih-ling-hsia, the term 'Shih-ling-hsia type' has often been used in place of 'Wei River Yang-shao.' At Lo-chia-kou in a stratum lower than those containing Ma-chia-yao and Wei River Yang-shao material, were found wares said to resemble those of Miao-ti-kou (*ibid.*, p. 25, fig. 1; p. 26). This classification is however open to question. None of the so-called 'Miao-ti-kou' finds from Lo-chia-kou are illustrated, while the vessels from Chuang-lan-hsien included in the report as examples of the 'Miao-ti-kou' variety (*ibid.*, p. 29, fig. 6:1) — which closely resemble the vessel of Figure 142 from Kan-ku — is a type unknown at Miao-ti-kou but related to Pan-p'o (see pp. 44–45). This raises the issue whether the material found in the lowest level at Lo-chia-kou might instead represent an extension of the Pan-p'o tradition into the Upper Wei River area.
- ¹⁴⁾ The various phases of the Ma-chia-yao tradition are described in the present chapter, pp. 30–43; the possible origins of the Wei River Yang-shao are treated in pp. 43–45, 52–56.

¹⁵⁾ Hsia Nai, *KK* (1977/4), 229.

¹⁶⁾ *Ibid.*

¹⁷⁾ Shih Hsing-pang, *KK* (1962/6), 318–329.

¹⁸⁾ N. Palmgren, *Kansu Mortuary Urns*, pl. III:7.

¹⁹⁾ The excavation of a burial ground at Hua-chai-tzu just south of Lanchou carried out in 1977 provides the first reliable documentation of proto-Ma-chia-yao I finds in the Lanchou area (Chang Ming-ch'uan, et al., *KKHP*, 1980/2, 221–238, pls. 1–8). The proto-Ma-chia-yao vessels from this site have the appearance of being slightly earlier and still more closely allied to Pan-shan than any of those in the Stockholm collection that I have discussed. It is also interesting to note that two of the Hua-chai-tzu vessels, one exhibiting traits of the proto-Ma-chia-yao style and the other of pure Pan-shan type, are decorated with spirals of the Pan-shan Stage II variety (*ibid.*, pl. 4: 4, pl. 5:5).

It should be observed that the authors of the report classify the Hua-chai-tzu pottery as 'early Pan-shan' (= our proto-Ma-chia-yao I), while vessels from other sites mentioned elsewhere in the report of the kind that I have termed 'proto-Ma-chia-yao II' are designated as 'late Ma-chia-yao' and as 'Ma-chia-yao — Pan-shan transitional type' (*ibid.*, p. 232, fig. 12: 1, 8). Although they clearly recognize these types as transitional between the two pottery traditions, they are of the opinion that Pan-shan derives from Ma-chia-yao. As a consequence, the evolutionary sequence which they illustrate (*ibid.*) is precisely the reverse of the one I have proposed. Because some of the burials at Hua-chai-tzu overlap with others, the authors have attempted to separate the finds into an earlier and a later phase; but the vessels illustrated in the report may be too closely contemporary with one another to warrant such a division.

²⁰⁾ J. G. Andersson, *BMFEA*, 17 (1945), 1–64.

²¹⁾ J. G. Andersson, *BMFEA*, 15 (1943), pl. 102: 6–7.

²²⁾ Among the most remarkable anthropomorphic images associated with the later Ma-chia-yao style are the groups of five dancing figures painted on the interior of a bowl unearthed from M 384 at Shang-sun-chia-chai, Ta-t'ung-hsien, Ch'ing-hai in 1973. These swaying figures, each in tight knee-length dress that flares to the left at the hem, are depicted in straight rows and holding hands (*WW*, 1978/3, 48–49, color plate 1, top).

²³⁾ The occasional occurrence of a powder-blue paint (Figure 106) is, however fortuitous, a discoloration of the paint which occurred while the pottery was in the earth. The effect of this change in hue, especially when it occurs on the pinkish ware, is nevertheless most pleasing to the modern eye.

²⁴⁾ Margit Bylin-Althin, *BMFEA*, 18 (1946), pls. 42–51.

²⁵⁾ Lin Hsiang, *KK* (1965/12), 614–618.

²⁶⁾ Chang Hsüeh-cheng, *KKHP* (1960/2), 14, fig. 2: 4.

²⁷⁾ Ning Tu-hsüeh, *KK* (1960/9), 4, fig. 4; *KKTH* (1956/6), pl. 1; *WWTKTL* (1956/12), cover; Terukazu Akiyama et al., *Arts of China: Neolithic Cultures to the T'ang Dynasty* (Tokyo and Palo Alto, 1968), No. 4.

²⁸⁾ *WW* (1976/3), 24–30.

²⁹⁾ See Sommarström, *BMFEA*, 28 (1956), pl. 46: 12; pl. 47: 4, 9, 10; *WW* (1976/3), 29, figs. 2–3.

³⁰⁾ Hsia Nai, *KK* (1977/4), 229.

³¹⁾ Shih Hsing-pang et al., *Hsi-an Pan-p'o*, Archaeological Monographs, Series D, No. 14 (Peking, 1963), pl. CXLVI: 6, 9, 10; CXLVII: 8; also see *KK* (1973/3), 144, fig. 17 and pl. 2: 2 for Pan-p'o vessels from Chiang-chai, Lin-t'ung-hsien.

³²⁾ *Hsi-an Pan-p'o*, pl. CXXVII: 1–4.

³³⁾ *KK* (1959/5), 229–230, 241, pls. 1–2.

³⁴⁾ Chang Hsüeh-cheng, *KKHP* (1960/2), 13.

³⁵⁾ Hsia Nai, *KK* (1974/4), 230.

³⁶⁾ *KK* (1973/3), 149, fig. 1:5; 150, fig. 2.

³⁷⁾ *Ibid.*, 149–150, and 149, fig. 1:1–4.

³⁸⁾ Hsia Nai, *KK* (1977/4), 229.

³⁹⁾ *WW* (1976/3), 26. The introduction of certain Chung-yüan pottery forms and their incorporation into the Ma-chia-yao tradition may also have taken place during the florescence of the Wei River Style and of Ma-chia-yao Styles Three and Four. Most notable in this regard is the pointed bottom *p'ing* of Figure 99.

Chapter III

THE WEI RIVER STYLE

The Wei River valley between Wei-yüan in Kansu and Pao-chi in Shensi is geographically the corridor connecting Kansu and the western part of the Chung-yüan, and here contacts between the cultures localized in these two disparate regions most likely took place. The area is of extreme archaeological importance, since the pottery excavated there can, to a considerable degree, elucidate the relationship between the Ma-chia-yao and Miao-ti-kou traditions and afford a comprehensible reconstruction of how the otherwise unaccountable Miao-ti-kou designs came to be.

The wares found in this region are complex and heterogenous, and before approaching those aspects of the finds which reveal the transitional link between Ma-chia-yao and Miao-ti-kou, it becomes necessary to differentiate these various types of material. Apart from the Ch'i-chia and later wares, the pottery discovered in the Wei River region comprises essentially four distinct styles: Pan-p'o remains, of more than one period; Ma-chia-yao, also of more than one phase; the Wei River Yang-shao, or, as we shall come to term it, the Wei River 'Transitional Style'; and finds of the true Chung-yüan Yang-shao of the Miao-ti-kou stage. The early Pan-p'o remains of Pao-chi have been mentioned in the previous chapter;¹⁾ but in addition sherds bearing zigzag designs reminiscent of a somewhat later phase of Pan-p'o were among those discovered by Andersson at Liu-chia-shang-mo, T'ien-shui-hsien, in Southern Kansu.²⁾ It was Andersson, also, who was responsible for the discovery of the sherds from Li-chia-wan, in the same general vicinity, of a pure Miao-ti-kou type.³⁾ The Miao-ti-kou remains, as will become clear, must stem from a time subsequent to the initial interaction between Ma-chia-yao and the Chung-yüan. Most of the significant discoveries of Ma-chia-yao ware and of the Wei River Yang-shao, on the other hand, occurred in the course of the archaeological surveys carried out along the Wei River between 1956 and 1959,⁴⁾ and we shall be concerned chiefly with these.

At fifty-seven localities in the Wei-yüan, Lung-hsi and Wu-shan districts, no less than sixty-nine sites were discovered; of these, sixteen were classified as 'Yang-shao' (= Wei River Yang-shao) and two as 'Kansu Yang-shao' (= Ma-chia-yao). The two 'Kansu Yang-shao' sites, both in the Wei-yüan area, contained Ma-chia-yao material of an early type: a squat amphora with a tall neck, and a deep round-bodied bowl decorated with narrow concentric arcs.⁵⁾

Material of the mature Ma-chia-yao phases was apparently more plentiful.⁶⁾

One of the more notable sites in this area to reveal both Ma-chia-yao and Wei River Yang-shao remains is that of Hui-ti-erh in Wu-shan.⁷⁾ The pottery found there comprises several forms, including a ceramic house, which is *sui generis*.⁸⁾ The Ma-chia-yao types are represented by a deep bowl with tapering sides and high sloping rim, and a small round-bodied jar with a tall cylindrical neck.⁹⁾ The vessels exhibit the usual parallel circumferential lines and multiple undulating lines of Ma-chia-yao. The ware is described as being of the typical sandy colored variety.¹⁰⁾

At Hui-ti-erh other painted vessels, usually of reddish color were mixed with the typical Ma-chia-yao examples; these are classified in the report as 'Yang-shao' rather than as 'Wei River Yang-shao'. Among them we find the amphora with tall neck strongly flaring at the mouth, and one bowl with 'leaf-shaped' patterns constructed on the basis of segmental triangles.¹¹⁾ We are told that the surfaces of other red ware vessels are occasionally coated with white slip.¹²⁾ While the author of the Hui-ti-erh report is cognizant of the two types of ware represented at this site, no mention is made of stratigraphical evidence for the priority of one or the other.

In regard to the Wei River excavations in general, Kuo Te-yung has observed the following: "the Wei River sites frequently contain 'Kansu Yang-shao' [Ma-chia-yao] material, but as one moves west toward the T'ao River area into the Wei-yüan and Lanchow regions, only pure 'Kansu Yang-shao' ware is to be found. Conversely, although the more easterly Wei River sites of Wei-yüan, Lung-hsi, Wu-shan, Kan-ku and T'ien-shui reveal traces of Ma-chia-yao ware, they contain primarily 'Yang-shao' ware."¹³⁾ Apparently none of these sites afforded firm evidence that would determine the relative date of either of the two styles. Kuo, relying on the Ma-yü report, nonetheless concludes that the red ware 'Yang-shao' type preceded the 'Kansu Yang-shao'.¹⁴⁾

He makes, however, two further points: (1) that both the 'Kansu Yang-shao' and the 'Yang-shao' are to be considered as two aspects of one and the same tradition, and (2) that the 'Yang-shao' of what he believes to be the later period received influence from the 'Kansu Yang-shao' and returned it.¹⁵⁾ This cryptic conclusion would in fact seem to imply on the part of the author a suspicion that the Ma-yü stratigraphy may not afford the complete answer to the 'Kansu Yang-shao'—'Yang-shao' relationship, and that the 'Kansu Yang-shao' is not entirely to be explained as a unilinear development from the Chung-yüan Yang-shao. In short he would seem to accept the Nuclear Theory only with some recognition of contingency.

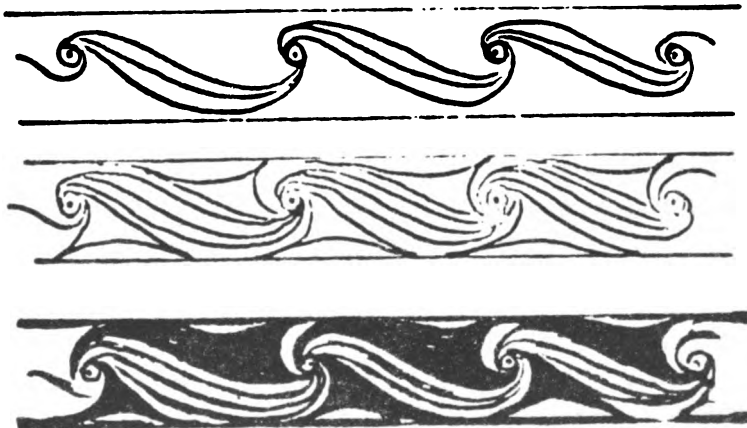
It is unfortunate that Kuo does not supply the reasoning behind the provocative statement he makes. His suggestions, however, would seem to be fundamentally in keeping with my own view that the Wei River Yang-shao may have developed out of a fusion of ideas from Ma-chia-yao and from some other

Diagram 1

A Ma-chia-yao spiral



The procedure for inscribing the Lei-chia-kou design



culture, difficult to pinpoint—possibly related to Pan-p'o, but definitely not related to the mature Miao-ti-kou as we know it—which had existed previously in the Chung-yüan and had in the course of time moved out westward along the Wei River.

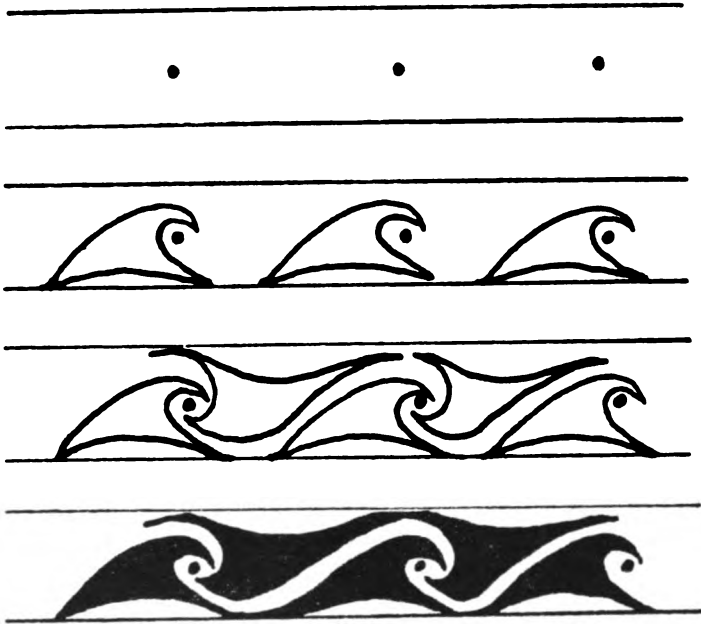
At this point we should examine more closely several examples of the so-called 'Yang-shao', or Wei River ware found in the eastern part of Kansu. One important sherd (Figure 144) found in the Kan-ku/T'ien-shui area⁶⁾ (no site is named) comprises the neck and upper part of the mantel of a painted amphora or jar. In form, with its tall flaring neck and everted rim and the apparent roundness of the mantel, it closely resembles the red ware amphorae of Ma-chia-yao previously illustrated and the example in the Shanghai Museum (Figures 129–131). The design on the upper part of the mantel, a spiral composed of small nuclei with central dots and sets of spiral arms running from the bottom of one nucleus to the top of the next, is perfectly in keeping with the Ma-chia-yao tradition, if less proficiently executed.

The second important sherd (Figures 145–146) consists of the broken neck and upper part of the body of an amphora or jar, found at Lei-chia-kou, Wu-shan-hsien.⁷⁾ The vessel not only exhibits the round body typical of Figures 130–131, but in addition the same appliqué chattered ring around the base of the neck. The design painted on the body is of utmost significance (Diagram 1). It is inscribed on the basis of small nuclei, with round central dots, placed at equal intervals around the side of the body. Spiral arms, as usual, connect the lower right of one nucleus to the upper left of the nucleus to the left. So far the design is identical in composition to those seen on the three vessels just mentioned. What differentiates the appearance of this vessel from the others, and what may initially obscure the dependence of this design upon its Ma-chia-yao prototype is the fact that the usual segmental triangles, inscribed in the same way as before, border the nuclei, spiral arms and upper and lower border very closely, and that consequently almost the entire area between the spiral and the borders is filled in with black. The result is a 'negative design' in which the areas left in reserve assume the role of the principal design itself. The design thus reads as a series of ring-like nuclei connected by pairs of crab-claw-like arcs bordered above and below by very thin curved lines. Beneath the scallop pattern in reserve at the base of the neck are thin curved arcs left in reserve where the third sides of the segmental triangles meet the upper border line. The negative spiral design, perhaps originally a chance effect, has become an innovation intriguing in itself, and, in the case of the Lei-chia-kou vessel, is evidently of deliberate intent.

A squat red ware amphora with a sloping mantel unearthed at the Wu-shan site of Hui-ti-erh (Figure 147)⁸⁾ will be seen to supply the final link between the spiral designs we have described above and the designs of Miao-ti-kou. The Hui-ti-erh vessel bears on its mantel a design of a negative spiral that would seem basically in keeping with that on the Lei-chia-kou vessel, save that here the spiral moves in

Diagram 2:

The procedure for inscribing the Wu-shan design



a counterclockwise direction. Immediately apparent, however, is the oval, as opposed to the normally circular, shape of the nuclei in reserve. That these nuclei are oval is not the result of chance or poor drawing; it is, on the contrary, a definite clue to the fact that the method of forming these negative spiral patterns has changed in a radical manner.

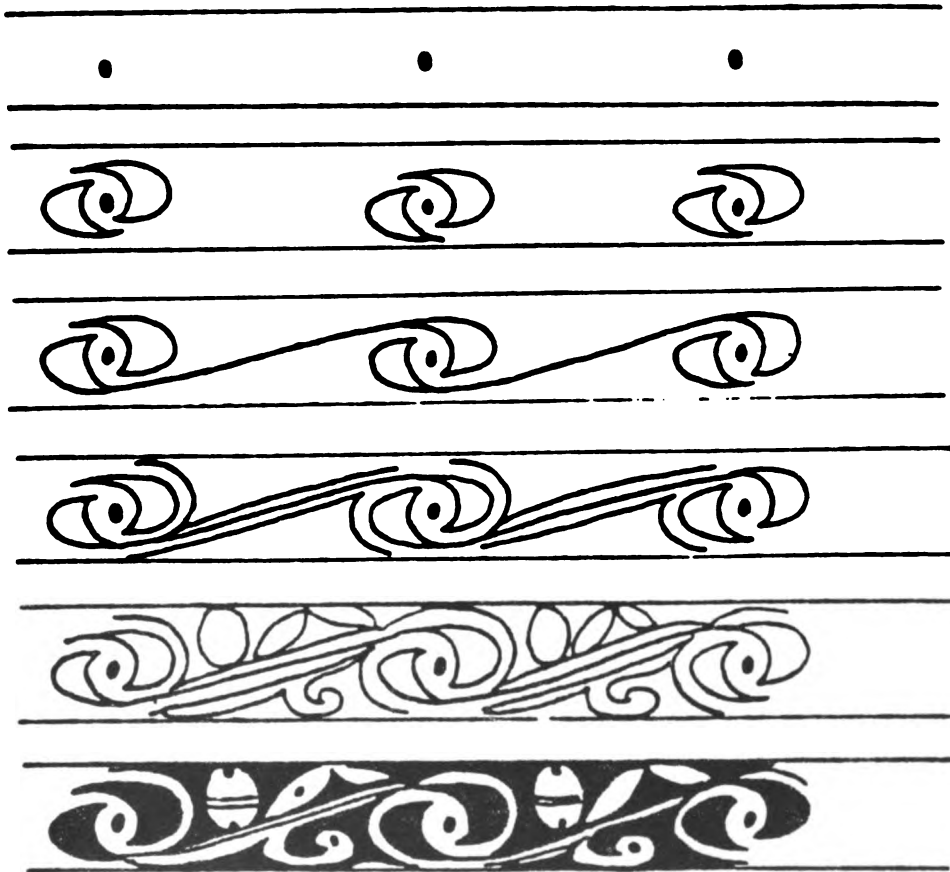
There appears to be only one way that this design could have been executed, that is, one method which accounts for all its particulars (Diagram 2). First, dots, rather than nuclei, are placed around the body of the vessel equidistant from each other. No spiral arms were drawn to link these dots. Instead a segmental triangle, beginning at the lower border, at a point more or less equidistant from one dot, and from that to the left, curves upward on a diagonal, arches around the dot, curves back toward itself and then descends in a reverse curve to a point on the lower border. Identical segmental triangles are then systematically drawn for each dot. In turn, a second series of segmental triangles is drawn, each originating at a point on the upper border above one of the dots. Each curves downward to a point beneath the dot and then sweeps upward to the right, following the diagonally oriented curve of the next segmental triangle drawn from the lower border. These two rows of segmental triangles are completely or partially filled in, with the result that the area in reserve between them forms the negative spiral. Such a procedure, if of extreme conceptual complexity and sophistication, is nevertheless, once it comes into common use, a far more expedient method of creating the negative spiral than that used in the Lei-chia-kou example.

Once this new method of inscribing negative spirals comes into being, there is but a short step to the Miao-ti-kou designs. In the case of the design on the exterior of a typical Miao-ti-kou bowl, or *p'en* (Figure 162), the procedure was as follows: (1) A series of dots was placed equidistant around the vessel. (2) Pairs of crescentic arcs, which are abbreviations of the segmental triangle, are drawn so that they encompass each dot.¹⁹⁾ (3) Diagonal curving lines are drawn from the lowermost point of one crescentic arc to the uppermost point of the next crescentic arc to the right. (4) A partial segmental triangle is then drawn, so that one side follows closely the curve of an upper crescentic arc, while the second follows the diagonal that leads to the next configuration to the right. This is repeated above and below the diagonal for each pair of crescentic arcs. (5) The segmental triangles are filled by various configurations. (6) The crescentic arcs and those areas of the segmental triangles apart from the secondary configurations are painted in. The design is then complete. Nor could it have been executed in any other manner (Diagram 3).

On the basis of the foregoing analysis, we may conclude that the Miao-ti-kou designs owe their existence to those characteristic of the Wei River Yang-shao tradition, which in turn are predicated upon the Ma-chia-yao designs. It is not feasible, in any logical or rational manner, to reverse this sequence of development. We conclude that the prevailing consensus of opinion, originally

Diagram 3:

The procedure for inscribing a Miao-ti-kou design



derived from the Ma-yü stratigraphy and buttressed by interpretations of the stratigraphic evidence from the Wei River area and of the available radio-carbon dates,²⁰) which postulates that Miao-ti-kou preceded Ma-chia-yao and accounts, in some way, for the development of Ma-chia-yao, is patently false. In the late Ma-chia-yao and the Wei River designs, the very gradually increased interest in the negative spiral, as well as the subsequent utilization of the segmental triangle as the primary device in the development of an optimal way of producing the design, are the features that constitute the only promising context for an adequate explanation of the otherwise inexplicable designs of Miao-ti-kou.

Notes to Chapter III

- ¹⁾ *KK* (1959/5), 229–230, pls. 1–2. Also see Chapter IV, pp. 64–65.
- ²⁾ J.G. Andersson, *BMFEA*, 15 (1943), pl. 61: 1–3, 7.
- ³⁾ *Ibid.*, pl. 58: 1–8; pl. 59: 1.
- ⁴⁾ Chang Hsüeh-cheng, *KKTH* (1958/5), 1–5; Kuo Te-yung, *KKTH* (1958/7), 6–16; Ma Ch'eng-yüan, *KK* (1961/7), 355–358, 360, pl. 6. The important finds at Shih-ling-hsia, Wu-shan and Lo-chia-kou, T'ien-shui made after this time are referred to in the preceding Chapter, p. 28. Complete reports are not yet available for either site.
- ⁵⁾ Kuo Te-yung, *KKTH* (1958/7), 9, fig. 3: 1–2.
- ⁶⁾ *Ibid.*, p. 10, fig. 4; p. 11, fig. 5.
- ⁷⁾ Ma Ch'eng-yüan, *KK* (1961/7), 355–358, 360, pl. 6.
- ⁸⁾ *Ibid.*, pl. 6: 1–3.
- ⁹⁾ *Ibid.*, pl. 5: 5, 7, 8.
- ¹⁰⁾ *Ibid.*, p. 355.
- ¹¹⁾ *Ibid.*, p. 356, fig. 1: 1–2, 4.
- ¹²⁾ *Ibid.*, p. 356.
- ¹³⁾ Kuo Te-yung, *KKTH*, (1958/7), 10.
- ¹⁴⁾ *Ibid.*, pp. 8, 10.
- ¹⁵⁾ *Ibid.*, p. 10.
- ¹⁶⁾ Chang Hsüeh-cheng, *KKTH* (1958/5), pl. 1: 3.
- ¹⁷⁾ Kuo Te-yung, *KKTH* (1958/7), 8, fig. 2: 1; 9, fig. 3: 5.
- ¹⁸⁾ Ma Ch'eng-yüan, *KK* (1961/7), pl. 6: 9.
- ¹⁹⁾ An alternate method is the placement of the pairs of crescentic arcs without the dots as guide points. In this case dots are added to mark the nuclei only later.
- ²⁰⁾ *WW* (1976/3), 24–30; Hsia Nai, *KK* (1977/4), 223, 229–230; and Chapter II, pp. 28–29.

PART TWO

CENTRAL CHINA

Chapter IV

PAN-P'O

For two reasons a consideration of the pottery traditions of Central China requires that we direct our attention first to Pan-p'o. To begin with, there is by now sufficient evidence to suggest that its earlier phases predate the Miao-ti-kou pottery, and hence, for chronological reasons, it is more properly discussed before a treatment of Miao-ti-kou. Secondly, we have definite reason to believe that a stage of the Pan-p'o tradition, antecedent to the beginning of the Miao-ti-kou style, was distributed westward as far as Pao-chi, from whence, as suggested in the preceding two chapters, it mingled with and influenced the Ma-chia-yao culture in Kansu and may also have served as the cultural medium through which the Ma-chia-yao designs were carried eastward. If we assume that the origins of the Miao-ti-kou designs can ultimately be traced to Ma-chia-yao, then whatever stage of the Pan-p'o culture that might account for the eastward transmission of those designs would of necessity have to be shown to be earlier and clearly separate from another stage of Pan-p'o, which, in turn, may be determined to be coeval with a mature phase of the Miao-ti-kou tradition. What we must turn to, then, is a periodization of the ceramics at Pan-p'o itself in order to ascertain the sequences of earlier and later styles.

Leaving aside the theories of Shih Hsing-pang and Su Ping-ch'i, who considered Pan-p'o and Miao-ti-kou as contemporary and parallel cultures,¹⁾ there was, prior to the availability of radio-carbon dates for Pan-p'o material, a long established general tendency to regard Pan-p'o as the earlier. The most persuasive support for this belief was furnished by the stratigraphy at the Shensi site of Hsia-meng-ts'un, Pin-hsien.²⁾ At this site, the foundation of a square house, F 3, was discovered above three ash-pits (H 30, H 31 and H 32) from which

came pottery of the Pan-p'o type; and it was further observed that the foundations of one wall of F 3 were broken into, obviously after the house had been abandoned, by a large ashpit, H 14, which was found to contain pottery of the Miao-ti-kou type.

Evidence from the site of Hsi-wang-ts'un, Jui-ch'eng-hsien, Shansi, frequently cited as contradicting that from Hsia-meng-ts'un, is, in the opinion of the present writer, frankly suspect. According to that report,⁹) Yang-shao finds in the south Shansi area are divided into three types: (1) 'early' Pan-p'o; (2) Miao-ti-kou; (3) 'late' Pan-p'o. In the particular case of Hsi-wang-ts'un, the lower level is considered to contain type 2 (Miao-ti-kou); the middle, type 3 ('late' Pan-p'o); and the third level, Lung-shan material. Yet a close examination of the typology used by the authors of the article reveals that what is termed type 1 'early' Pan-p'o, corresponds not to the early type as defined in the *Hsi-an Pan-p'o* site report, but to the later stage of severely geometricized designs. What is termed 'late' Pan-p'o, on the other hand, is relatively nondescript material not clearly related to Pan-p'o at all, but probably of a late and degenerate Miao-ti-kou type.⁹)

The consensus of scholarly opinion that Pan-p'o pre-dates Miao-ti-kou has been supported by the recent series of radio-carbon dates for this site, which range from 4770 ± 135 B.C. to 4290 ± 200 B.C.⁹) But the latest date adduced so far for Pan-p'o precedes the single date available for Miao-ti-kou (3910 ± 125 B.C.)⁶) only slightly, so there is reason to believe that Miao-ti-kou and Pan-p'o may have overlapped in time, as indeed certain sherds clearly of the Miao-ti-kou type found at Pan-p'o would indicate.⁹)

Nevertheless, although the radio-carbon dates for Pan-p'o support the likely priority of Pan-p'o over Miao-ti-kou, these dates are of less use than one might expect in attempting to distinguish various stages in the development of Pan-p'o itself. The carbon dates for Pan-p'o are as follows:

1 ZK38	origin unclear	4770 ± 135 B.C.
2 ZK121	F1 south side	4610 ± 130 B.C.
3 ZK122	west cliff	4550 ± 130 B.C.
4 ZK127	F 37 or F 38	4290 ± 200 B.C. ⁹)

The problems with the specimens of carbonized wood that were selected for scientific analysis are numerous and troublesome. The origin of the first sample is said to be unclear, so that it is deprived of its context, by association with which, perhaps, certain objects could be designated as early. A similar problem pertains in the fourth case: If the pieces of carbonized wood had, as apparently first assumed, come from F 36, the date of 4290 ± 200 B.C., relatively late in the series, would have been in direct opposition to the Pan-p'o stratigraphy as published in the original *Hsi-an Pan-p'o* monograph, where F 36 (alias F 5) is recorded as belonging to an early stratum, especially in relation to F 1 which was said to belong to the late phase.⁹) According to An Chih-min, this contradiction is

accounted for by the following: F 35 (alias F 4), F 36 and F 37 were located close together, with F 37 belonging to a lower level, F36 to the middle, and F 35 to the upper level. Consequently, F 36 and F 37 were called 'early' and F 35 'late'. But An notes that in the original reports F 36 is called 'late'. Remarking upon the discrepancies between the original records of the excavation and those which went into the writing of the report, he concludes that at some point the labeling of the houses in question was confused, and hence it can no longer be determined from precisely which foundation the specimen came.¹⁰⁾

The sample taken from the broken cliff to the west of F 1 also tells us little as far as the periodization of Pan-p'o is concerned. The vessels, as well as other materials coming from the west cliff, are of an unrevealing type.¹¹⁾ Of the thirty-seven vessels unearthed at this location the most conspicuous were bowls of the rounded bottom type, prevalent, according to the authors of the Pan-p'o report, in both the upper and lower strata at Pan-p'o.¹²⁾ Their only characteristic decoration is a simple red line bordering the rim. Nevertheless, none of the vessels excavated showed the more angular profile or geometricized designs associated with the upper levels at Pan-p'o, so that one may, at least tentatively, conclude, as did the authors of the report, that the material discovered here does not represent the latest Pan-p'o phase.¹³⁾

The date of 4610 ± 130 B.C. accorded the specimen from F 1 is perhaps slightly more helpful, in so far as several vessels were discovered within the limits of this foundation, namely: a jar with large cover; a thin cylindrical vessel, apparently with pointed bottom; and a fragment of a *p'en* painted on the interior with the motif of a mask-like face with two fish attached to either side at the level of the mouth.¹⁴⁾ The first two vessels are of poor quality and stylistically insignificant, whereas the *p'en* is the remnant of a more impressive piece, and its decoration might suggest that the vessel belongs to a middle period in agreement with the date for F 1, which is neither the earliest nor the latest among the available radio-carbon dates. The clues to be taken from this fragment, however, are slim indeed, and there remains the problem that whereas the carbon-14 date suggests a middle period at Pan-p'o, stratigraphically F 1 is said in the report to belong to the later phase.¹⁵⁾

Thus if the carbon dates for Pan-p'o afford us some notion of when the site was inhabited relative to similarly ascertained dates of other cultures, and attest, too, that the habitation of Pan-p'o was of considerable duration, they leave us completely at sea as far as the evolution of style is concerned.

Furthermore, although the excavation at Pan-p'o was extensive, the stratigraphy complex, and the report one of the most complete and detailed ever published, all this is of surprisingly little assistance in attempting any fine categorization of styles. The vessels and sherds reproduced in photographs are a miniscule selection from the nearly one thousand complete vessels and over half a million sherds discovered.¹⁶⁾ With the materials available in publication it would

seem next to impossible to second-guess the archaeologists who have the total finds at their disposal, or to add much to the stylistic sequences they have detected.

The authors of the *Hsi-an Pan-p'o* report have separated the primary vessel forms into an early and a late category, and the distinctions in each case seem clear (Figure 148). The bowls, an especially prevalent form, in the earlier stage have rounded sides and frequently a rounded bottom. Later ones have rounded, or else relatively straight, tapering sides; rims are considerably broader and heavier than on earlier examples. It is thought that in the late period some of these vessels had a low circular foot, sometimes serrated along the edge. Considered to straddle these two divisions are simple rimless bowls and a second type with a narrow rim, a vessel distinguished primarily by the shape of its body which is composed of a straight, outcurving area beneath the mouth and a strongly incurving, rounded lower section. Of these two types, it would appear that the latter, on account of the more geometricized designs frequently painted on the upper part of the outer wall, belongs more properly to the later stage.

A vessel almost equally prominent and telling is the pointed bottom *p'ing*, or water vessel, which in the earlier stage has an ovoid body tapering to the pointed bottom and contracting at the top toward a gourd-shaped neck; later the *p'ing* is characterized by a narrow cylindrical neck flaring at the mouth and the sides of the body either taper from the shoulder straight to the pointed bottom, or they may be indented, giving the central section a slightly concave profile. Unlike the earlier *p'ing*, which are decorated with cord impressions, the surfaces of the later examples are usually smooth. In general there seems to have been a gradual shift away from the softer, more evenly rounded profiles to ones somewhat more angular in their articulation. A certain hardening and stiffening of the forms, particularly in the case of the bowl, seems to have taken place.

A not dissimilar transformation can be noted in the painted designs. Painted designs were applied primarily to the bowls and *p'en* basins, and infrequently to any other type of vessel. The larger *p'en* bear designs exclusively on the interior surface, while the smaller ones are decorated only on the upper half of the outer surface. By the same rule there appears to be no single vessel with designs simultaneously on both the inner and the outer surface. The rims of both types of bowls are painted normally with a single band, but occasionally with systematically organized radial bands and arrowhead-like shapes in reserve.

According to the *Pan-p'o* report, the designs undergo a development from relatively naturalistic to increasingly geometric and abstract motifs. This transformation, it is believed, is most fully exemplified in the development of the fish designs (Figure 149). The fish, originally fairly realistic, were outlined in profile and described further with mouth, eyes and fins. The body is often structured by a design in black, congruent with the outline and approximating two triangles lying lengthwise that merge at the tips. In the course of their

transformation, the bodies of the fish come further to approximate a rectangle from which segments are cut on all four sides; the head becomes a triangle, and the mouth and fins are trimmed off in the pursuit of regularized form. Frequently the fish confront one another; and eventually the confronted geometricized fish are reduced to rectangular panels bisected horizontally and vertically with the resulting quadrants divided diagonally, one half painted black and the other half left unpainted. All that remains of the fish are the eyes, which appear as two circles placed close together in opposite triangles. Subsequently the eyes also vanish, while the rectangles continue to be subdivided in such a manner that there occurs a perfect balance between painted and unpainted surface.

This tendency toward geometricization and the play between painted and unpainted, or positive and negative, within the design may have been an entirely internal evolution, perhaps initially suggested by the more abstract patterns on the rims of the *p'en*. Equally, it may have been inspired by outside influence, that is, by the Miao-ti-kou designs where abstract designs and the contrast between painted and unpainted surface were of importance. The contemporaneity of the late phase at Pan-p'o and Miao-ti-kou, and the hypothesis of such an influence of Miao-ti-kou on Pan-p'o is substantiated both by the presence of Miao-ti-kou sherds at Pan-p'o and by late geometricized Pan-p'o ware from the site of Tung-chuang-ts'un, Jui-ch'eng-hsien, Shansi,¹⁷⁾ which incorporated specific Miao-ti-kou motifs. This late Pan-p'o site, interestingly enough, lies twenty-two kilometers east of Hsi-wang-ts'un,¹⁸⁾ a major Miao-ti-kou settlement.

Not only was the percentage of painted ware at Pan-p'o-ts'un very small in proportion to the unpainted ware, but the repertory of designs, even though at one point based upon seemingly unlimited naturalistic resources, was exceedingly restricted. Apart from fish, one meets only with masks with fish-like appendages; deer-like animals, and one or two instances of a toad or turtle. The masks exhibit almost no developmental sequence whatever, and the motif appears to have been abandoned long before the geometric stage set in.

In what would seem likely candidates for the very earliest designs of fish (Figures 154, 155), the creatures are represented in simple profile with a relatively flat ventral side and the back arched, or rising diagonally toward the area of the gills. The fins are represented by a series of hair-like lines and the tail by two forked lines. The body of the fish is either filled in with black paint or with cross-hatchings suggesting scales.

Belonging to this same primitive naturalistic style must be counted the small deer¹⁹⁾ seen in profile; and in the same category, but less finely drawn, is the toad or turtle seen climbing up the side of the heavily potted bowl from Chiang-chia, Lin-t'ung-hsien (Figure 155). This small creature is composed of a circle filled with dots; from it projects the hemispherical head, divided in the middle and with two dots for eyes. From the sides extend the legs, ending in three toes each. The manner in which it is drawn endows this creature with an expressive, child-like

and lovable quality. But the deer and the toads seem to have been eliminated early on—at least they are never geometricized.

The desire to render these creatures in an expressive manner to some degree also affected the depiction of fish, which are not very expressive by nature, on the outsides of the later, more angular *p'en*. In certain cases the fish take on a smiling mien (Figure 156), while others are fitted out with rows of pointed teeth suggesting a more predatory but not entirely unfriendly character (Figure 157). Such observable distinctions as the direction in which the fish is looking²⁰ are explored, and the fish are rendered in a less tentative way than before, the silhouette strongly outlined, the hair-like fins replaced by more solid-looking ones. By the late stage of the fish designs (Figure 158), the more tender interest in the natural forms has been superseded by an emphasis upon geometricization and decorative patterning, and expressiveness altogether vanishes.

The designs on the earlier Pan-p'o vessels are at a very great distance from those painted on any other Chinese neolithic wares. At first the concern is with a narrow range of discrete images placed on the surface of the vessels in a symmetrical arrangement like small postage stamps with little regard for context. In due course the designs are enlarged, covering ever more of the surface. But even then these designs explore hardly at all the formal properties of the vessel. The fish, at best, follow each other single file around the outside of the vessel. Even in the late stage, when a concern with abstract design dominates, the bands merely encircle the outside of the vessel and remain in keeping with the increased angularity of the surfaces themselves. This new abstract, geometric décor, inevitably based upon the rectangle and its subdivision, and upon a simple balanced relationship between painted and unpainted surface, remains, by contrast to Kansu ware or the Miao-ti-kou style, remarkably uncomplicated and static.

Are we to conclude, then, Pan-p'o ceramics can be divided only into two stylistic phases, an early one in which bowls are rounder and designs display a primitive naturalism, later supplanted by an expressive naturalism, and a second phase, when bowls are angular and designs geometricized?

A sizable body of material, which the *Hsi-an Pan-p'o* monograph takes little into account, includes the artless small rimless bowls (Figures 150, 151), with curved sides contracting from the middle of the body towards a more narrow mouth. Inevitably these bowls show simple patterns, based upon the zigzag. The same design is to be found on the peculiar small *hu* (Figures 152, 153) with gourd-shaped mouths and gradually widening bodies that contract suddenly to a very narrow base. The authors of the Pan-p'o report make a passing reference to the effect: "Moreover, toward the later period there is also a marked tendency, besides using vessels of daily use for the purpose [of burial], to make vessels solely intended as funerary objects."²¹) Are we to consider the vessels described above, which have been given no place in the typology of the report, as identical

to those purportedly restricted to funerary use? The authors do not elaborate their point, but upon careful checking, it becomes indeed evident that, where the source is accurately known or has been recorded, the *hu* and other small vessels bearing the zigzag, are, without exception found to derive from the Pan-p'o gravefield.

Forewarned by Andersson's mistake of regarding Pan-shan and Ma-chia-yao as, respectively, the funerary, and domestic styles of the same culture, one comes to have deep suspicions about these particular *hu* and the bowls with zigzag decoration being the funerary style of either the late or the early phases at Pan-p'o. Rather, we may be sure that the graves in which these vessels were found belong to an altogether earlier Pan-p'o period, quite distinct from either the 'early' or 'late' periods distinguished by the authors of the report. It would seem that the habitation level to which this style at Pan-p'o-ts'un pertains may as yet be unexcavated.

If an examination of the information available for the gravefield at Pan-p'o produces no stratigraphical evidence either to support or refute this hypothesis, another site—the Pan-p'o settlement at Pao-chi²²)—supplies all the evidence we need. At Pao-chi was found, within the context of a combined dwelling and grave site, a completely homogeneous group of Pan-p'o vessels, *all* belonging to the particular style found in the gravefield at Pan-p'o-ts'un. Thus we are in a position to specify a third style within the Pan-p'o tradition, earlier than any other so far recognized, characterized by simple zigzag decoration, rimless bowls, and water pots with a very wide shoulder and narrow base. As the evidence from Pao-chi shows, the pointed bottom *p'ing* were also present at this early stage.²³)

Pursuant to this formulation, we may conclude that the Pan-p'o tradition, even in its earliest phase, was present in the Wei River area, at no great distance from eastern Kansu. Radio-carbon dates for later materials unearthed during subsequent excavations near Pao-chi strongly suggest that the Pan-p'o pottery continued to be produced in this region as late as the beginning of the fourth millennium.²⁴) The proposal that the Wei River Transitional Style, and ultimately the basis for the Miao-ti-kou painted decoration, was formed in the Wei River area by an intermingling of influences from the Pan-p'o and Ma-chia-yao traditions therefore becomes increasingly plausible.

It remains to attempt to establish at least an approximate date for the late Pan-p'o wares, which probably correspond roughly in time with the mature Miao-ti-kou style. This is best done, at present, by a consideration of yet one other site.

At Hou-kang, near Anyang in northern Honan, where stratigraphic evidence for the Yang-shao/Lung-shan/Shang sequence was first revealed in 1931,²⁵) neolithic remains were discovered more recently consistent with those from the earlier excavation, but typologically more varied.²⁶) As a result of these new finds, the Yang-shao pottery from Hou-kang can now be definitely classified as belonging to the Pan-p'o tradition. Simple bowls, either rounded or flat at the

bottom, nearly all of them rimless, were unearthed, and at least one of them bears a design based on a zigzag arrangement of diagonal parallel lines. The numerous jars of various shapes and sizes are also familiar Pan-p'o fare.

On the other hand, the Hou-kang material differs from Pan-p'o in three important ways: (1) the relative scarcity of painted decoration; (2) the presence of the so-called 'red-head' vessels, wherein bands of reddish color beneath the rim were achieved by exposing that restricted area of the surface to an oxidizing atmosphere during firing;²⁷⁾ and (3) the absence of the pointed-bottom *p'ing*.

Whether the Hou-kang pottery represents an early, middle or late stage of the Pan-p'o culture is an unresolved problem. The two carbon-14 dates now available for Hou-kang (ZK 134: 4390 ± 200 B.C. and ZK 76: 4185 ± 140 B.C.)²⁸⁾ suggest that it may have been contemporary with the later rather than the earlier phases at Pan-p'o. It is not clear, however, whether all the Pan-p'o type pottery at Hou-kang is to be attributed to the same period; the bowls bearing zigzag décor may be early, the 'red-head' bowls might be relatively late. Furthermore, the ornamentation on the rest of the ware is negligible, and we lack the *p'ing* which might afford a more unmistakable clue. Absent, however, are both the bowls with angular profiles and any sign of the geometricized décor of the latest stage at Pan-p'o-ts'un.²⁹⁾

The possibility thus arises that at the time of this Hou-kang culture, the late phase of the ceramic tradition at Pan-p'o-ts'un may not yet have begun. Such an hypothesis, however, must be approached with great caution, in so far as Hou-kang doubtless represents a peripheral manifestation of the Pan-p'o tradition that may well have preserved for a considerable period of time forms it had derived from the Shensi culture at some time past.³⁰⁾

If Hou-kang is less revealing than might be hoped in regard to periodization, it nevertheless adds an impressive dimension to what we know of the distribution of the Pan-p'o culture. It can now be said that at one or another time in its long history, which may have lasted as much as a millennium,³¹⁾ the Pan-p'o culture extended, or was known, from Hou-kang in the east as far west as Liu-chia-shang-mo, T'ien-shui-hsien in Kansu,³²⁾ where Andersson found it—a distance of almost 1000 kilometers; and thereby we gain some sense of the magnitude of the culture as a whole.

Notes to Chapter IV

¹⁾ Shih Hsing-pang, *KK* (1962/6), 326; Su Ping-ch'i, *KKHP* (1965/1), 63–67.

²⁾ *KK* (1960/1), 1–4, pl. 1; Li Shih-kuei, *KK* (1962/6), 292–295.

³⁾ Chang Yen-huang et al., *KK* (1962/9), 459–464.

⁴⁾ Chang Kwang-chih maintains a more skeptical attitude toward the Hsia-meng-ts'un finds, stating, "This would not rule out the possibility that the two cultural phases were contemporaneous, for Pin Hsien is closer to the Pan-p'o sphere of distribution than to the Miao-ti-kou, and this stratigraphy could indicate an intrusive situation." Chang, however, apparently inclines toward the view that Pan-p'o is the earlier of the two, on the grounds that, "the Pan-p'o phase was at an earlier stage of agricultural development, where fishing and hunting were still important to subsistence." (*Archaeology*, p. 126.)

⁵⁾ Hsia Nai, *KK* (1977/4), 229.

⁶⁾ *Ibid.*

⁷⁾ Shih Hsing-pang et al., *Hsi-an Pan-p'o*, pl. CLXI. It should be noted that the Hsia-meng-ts'un stratigraphy, referred to above, where Pan-p'o material was found to underlie that of the Miao-ti-kou type, does not invalidate the hypothesis that in its late stage Pan-p'o was influenced by Miao-ti-kou, since the Pan-p'o vessels from this site are not typical of the latest material from Pan-p'o-ts'un itself.

⁸⁾ Hsia Nai, *KK* (1977/4), 229.

⁹⁾ *Hsi-an Pan-p'o*, p. 41.

¹⁰⁾ An Chih-min, *KK* (1972/6), 37.

¹¹⁾ *KK* (1973/3), 146–148.

¹²⁾ *Hsi-an Pan-p'o*, pp. 143–146.

¹³⁾ *KK* (1973/3), 148.

¹⁴⁾ *Hsi-an Pan-p'o*, pls. CXLV; top; CXLIV: 1; CLII: 1, respectively.

¹⁵⁾ *Ibid.*, chart, p. 41.

¹⁶⁾ *Ibid.*, p. 105.

¹⁷⁾ *KKHP* (1973/1), 1–27, pls. 3–5.

¹⁸⁾ *Ibid.*, p. 31–58, pls. 14–22.

¹⁹⁾ *Hsi-an Pan-p'o*, pl. XVII.

²⁰⁾ *Hsi-an Pan-p'o*, pls. CLII: 3; CLIII: 4, 12, 16; LXI: 1.

²¹⁾ *Ibid.*, pp. 117–118, 313–314.

²²⁾ *KK* (1959/5), 229–230, 241, pls. 1–2.

²³⁾ *Ibid.*, pl. 2:9. That a third style can be detected among the ceramics at Pan-p'o-ts'un—one dating to an earlier period than the two described by the Chinese archaeologists—is strongly supported by excavations in 1977 at Pei-shou-ling, Pao-chi (Liu Sui-sheng et al. *KK*, 1979/2, 97–106, 118, pls. 1–3). From the middle of three strata at Pei-shou-ling was unearthed an assemblage of vessels (*ibid.*, p. 103, fig. 6, pl. 1, figs. 4, 5, pl. 3, figs. 3, 4) comparable to those excavated near Pao-chi in 1958 (*KK*, 1959/5, 229–230, pls. 1–2) and all recognizable as belonging within the proposed early style.

Ceramics from the upper level at Pei-shou-ling (*KK*, 1979/2, 105, fig. 7) reflect the late phase of geometricized designs at Pan-p'o-ts'un. But of far greater importance is the pottery from the lowest stratum at Pei-shou-ling, which may reveal a stage in the evolution of Chinese neolithic ceramics still more primitive than any phase of the Pan-p'o tradition. The chief characteristics of the wares from the lowest level are (1) the absence of painted decoration, and (2) the high percentage of tripod vessels. The tripod vessels are an interesting feature in this context, perhaps suggesting some connection between a nascent stage of the Pan-p'o pottery and that of very early wares from the southern coastal areas.

²⁴⁾ The series of carbon-14 dates for Pei-shou-ling, which extends from 7100 ± 140 B.P. to 5745 ± 110 B.P.

(*KK*, 1979/6, 558), indicates that the site may have been inhabited far earlier and for a much longer period of time than was Pan-p'o-ts'un itself.

²⁵⁾ Liang Ssu-yung, *Liang Ssu-yung k'ao-ku lun-wen chi* (Peking, 1959), pp. 91-98.

²⁶⁾ *KK* (1972/3), 14-25, pls. 2-4; *KK* (1972/5), 8-19, pl. 1.

²⁷⁾ *KK* (1972/5), 10.

²⁸⁾ *KK* (1979/6), 558.

²⁹⁾ More solid evidence for the date of the geometricized stage of the Pan-p'o type ware is perhaps provided by the carbon-14 date of 5745 ± 110 B.P. for the upper level at Pei-shou-ling; see note 24 above.

³⁰⁾ Remains of the 'Hou-kang' culture recently reported from a number of other locations in northern Honan and southern Hopei often occur in association with the so-called 'Ta-ssu-k'ung-ts'un' style of painted wares, which were first indentified at the Anyang site (*KK*, 1961/2, 63). The most significant of these finds were made in Hopei Tz'u-hsien at Chieh-tuan-ying and Hsia-p'an-wang (T'ang Yün-ming, *KK*, 1974/6, 356-360, pl. 1; *KKHP*, 1975/1, 73-87, pls. 1-2).

Whereas the Hou-kang ceramics are clearly related to the Pan-p'o tradition, those of the Ta-ssu-k'ung-ts'un type, while displaying an individual character of their own, reflect the influence of the Miao-ti-kou tradition, especially in its late and more easterly transformation at the hands of the craftsmen in central and eastern Honan, as for example at Ta-ho-ts'un (see Chapter V, part 2). Although there is as yet no stratigraphical proof, the Hou-kang wares are generally believed to antedate those of the Ta-ssu-k'ung-ts'un variety (Kao T'ien-lin, *KK*, 1979/1, 55; K. C. Chang, *Archaeology*, p. 128).

³¹⁾ *KK* (1979/6), 558, see note 24 above.

³²⁾ J. G. Andersson, *BMFEA*, 15 (1943), pl. 61: 1-3, 7.

THE MIAO-TI-KOU TRADITION

1 The Evolution of the Style

The particularly elusive and mystifying beauty of the Miao-ti-kou style—which sets it apart from both the simple Pan-p'o motifs and from those unrivalled, lucid and remarkably adroit Ma-chia-yao spirals—resides in part upon the procedure applied in the construction of the designs. The patterns, held in reserve and showing the warm, reddish brown of the ware, contrast with the surrounding darker, painted surface. By their greater substantive quality and fullness the Miao-ti-kou configurations stand in absolute distinction to the linear Ma-chia-yao designs, and in the case of Miao-ti-kou, the forcefulness and energy appear to emanate from within the forms themselves, in their graceful bending and turning, and not from the speed and sweep of calligraphic lines. The bodies of the spirals, because of the peculiar formulaic method by which they are produced, are not 'outlined' as such, and they take on a quasi-autonomous and somewhat self-determined existence; for there is a larger element of chance working in the realization of these designs, and as chance comes to assume a greater role, the spirals, in the end, cease to materialize.

Yet the other qualities intrinsic to the aesthetic effect of the Miao-ti-kou style, the curvilinear contours of the designs, the inevitability of a continually balanced and harmonious relationship between design and ground, as well as the fact that the decorated surface is entirely covered by an uninterrupted, organically interrelated, and infinitely varied movement of forms owe their very being to that distinctive tradition of spiral designs developed by the Ma-chia-yao artists and by some means and in some form transmitted to the Central Plains.

If we have in previous chapters sought to establish the ultimate origins of the Miao-ti-kou designs, it remains to chart the transformations, the development and eventual decline, of this style. The project is one to which several Chinese scholars have turned their attention.

Yen Wen-ming¹⁾ in an ambitious article on the periodization of the Yang-shao culture at Miao-ti-kou follows up a suggestion, presented at the end of the Miao-ti-kou monograph but not pursued there at any length,²⁾ to the effect that the numerous interpenetrating ash-pits at the Miao-ti-kou site, many of which contain cultural relics, could be used to elicit a chronological ordering of Miao-ti-

kou pottery. Yen concentrates primarily on a series of overlapping ashpits in T 300 which are located in close proximity to the house structure F 301.) He lists the sequence of ashpits ranging from the most recent to the oldest as follows: H 322 – H 346 – H 332 – H 354 – H 348 – H 331; and he compiled illustrations of the vessels that were recorded to have come from some of these ashpits.)

One of the characteristic vessels from H 322 is the *p'en* with strongly incurved lower half; the upper part of the vessel is painted with designs of dots and arcs. The second important form is the round-bodied *kuan*-jar bearing a strictly symmetrical pattern of repeated arcs in vertical sequence, separated by vertical bands in reserve. The finds from the next lowest pit, H 346, are more sparse, and direct comparisons with H 322 are difficult to make. Nevertheless, the *p'en* is distinguished from that in H 322 in so far as its lower half is not concave in silhouette, but tapers in a relatively straight line toward the narrow base. Yen believes that the change from straight to broken silhouette indicates the evolution from one type to another and can serve as an important criterion for the relative dating of Miao-ti-kou *p'en* in general.)

Since the rest of the ashpits in the sequence—H 354, H 348 and H 331—contained no pottery, Yen moves on to a consideration of the contents of H 338, not part of the original sequence underlying H 346, but the perimeter of which is cut into by H 346.) H 338 contained four vessels including a *p'en* of the same shape as that in H 322, but with a tighter pattern of dots and hooks. The *kuan*, however, is of greater interest, having a squatter form and wider neck. Its décor, furthermore, is similar to that on the *p'en*, and not to the simplified geometric sort as seen on the same type of vessel in H 322. The difference between the vessels in H 322, H 346 and H 338 represent, he feels, changes which take place over a relatively short period of time.

From the preceding group of closely interrelated pits he then broadens his correlations to other pits found throughout the site.) H 43 contained three *p'en* identical to those in H 322; in addition, one *wan* shows a pattern similar to that on a *kuan* from H 322. H 43 he thus decides is coeval with H 322, which was the most recent in its sequence. H 46 contained four painted *wan* and three painted *p'en*; of these, three of the *wan* are said to be identical (they are close but not 'identical') to the *wan* from H 322, while the design on the *p'en* shows similarities to that on a *wan* from H 322. As a consequence, Yen adjudges H 46 to be contemporary with H 43 and H 322, and hence late in the sequence.

As he continues this type of correlation—and he does so at great length—his comparisons become increasingly overextended, and his conclusions less convincing. What one learns from this exhaustive attempt to draw conclusions of a chronological and evolutionary nature from a comparative analysis of the contents of the innumerable ashpits at Miao-ti-kou is that, regrettably, there is not much to be gleaned from it. Possibly most of the ashpits were too close in time, possibly the broken vessels disposed of in any one ashpit differ too much

from one another in the time of their manufacture. At any rate, a correlation of the ashpits and their contents reveals no coherent evolution of the pottery found within them.

By far the most sweeping and provocative interpretation of the Miao-ti-kou culture to appear before the Cultural Revolution was that published by Su Ping-ch'i in 1965.⁹) His view was considerably broader than that of Yen Wen-ming, since his study included not only the Miao-ti-kou site itself, but a number of related sites as well. Many of the sites to which he refers, including the one upon which his analysis primarily relies, the Hua-hsien site of Ch'üan-hu-ts'un, have so far remained unpublished; this factor makes any evaluation of his conclusions most difficult, but at the same time affords us the only glimpse to date of these important finds.

The main focus of Su's article is an effort to prove the contemporaneity of Miao-ti-kou and Pan-p'o; but what concerns us at present is his treatment of the evolution of the Miao-ti-kou style, especially as evidenced by the Miao-ti-kou and Ch'üan-hu-ts'un material. He distinguishes what he considers to be the three most telling features of the Miao-ti-kou style—including two decorative motifs, flowers and birds, and the *p'ing* vessel form—and traces their development.

What he classifies as the flower motif he divides into two groups: designs resembling roses and those resembling chrysanthemums.¹⁰) He distinguishes several parts for each 'flower': petals, buds, leaves and stalks. At times the painted areas and, in other instances, the areas in reserve are read as constituting these botanical structures. Both the roses and chrysanthemums are divided into six types, each representing a phase in the sequential development (Figure 160).¹⁰) In stage I the roses have single 'petals,' of which the petal painted in black is connected to the bud; in stage II on the right side of the design are positive or black petals, this time double, which connect to a 'bud,' while on the left side of the design, another double petal drawn in black connects to a 'stalk.' In stage III the petals are double, and those painted in black connect to the stalks. In stage IV the petals are double, and those on the right side connect to 'roots,' while those on the left connect to the stalks. In stage V the petals are double, and those on the right have a root which connects to part of the stalk above. In the final or VIth stage the flower pattern dissolves. But no doubt it takes a curious bent of mind even to regard these designs as floral in nature, let alone to follow the supposed chronological parallels between the 'roses' and 'chrysanthemums.'

For the bird motif Su establishes five evolutionary steps (Figure 161, bottom).¹¹) In stage I the bird's head is rounded in outline and exhibits an eye and an open beak; the body is short. In stage II the head is long and has eyes and a beak; the body is short. In stage III the head is long with eyes and a beak, and for the first time the body is long. In stage IV the head is round with a long beak but no eyes, and the body is long. In stage V the head is round, there are no eyes, no beak, and the outline of the body is largely not there.

The *p'ing* vessel is divided into four stages (Figure 161, top).¹²⁾ In stage I the mouth is dome-like, the profile and the shoulder smooth, the belly tubular and the bottom long and narrow. In stage II, the mouth has a dome-like cover, the belly is more rounded, the bottom narrow. In stage III the mouth is flatter, the shoulder is higher, the belly compressed, and the bottom is nipple-shaped. In stage IV the mouth is wide and flares, the shoulder is more angular in outline, the belly is compressed and the bottom relatively blunt.

Su Ping-ch'i believes that each of these three features of Miao-ti-kou pottery form logical development sequences. In the case of the 'rose' the development is from a relatively plain and simple design to one that is more complex and closely knit, to a final stage in which the design is dissolved; the bird motif begins as an attempt to represent the bird-as-thing, in turn the bird-as-thing becomes the idea of a bird, and finally only a symbolic reference to a bird. In general he notes an evolution from a simple, to a complex and mature phase, to a final dissolution of the original idea—from something, as he puts it, quite pedantic and labored to something more in the nature of a spiritual likeness. The relationship of the positive and negative elements is balanced in stages III–IV, and the brushwork is careful. Later the positive pattern dominates and the brushwork is abandoned and helterskelter.¹³⁾

In conclusion he correlates the three elements into four stages as follows:¹⁴⁾

	<i>p'ing</i>	bird	rose
stage 1	1		
2	2	1–2	1–3
3	3	3	4–5
4	4	4–5	6

What remains least in doubt is the development of the *p'ing*, said to be based upon stratigraphic evidence and also upon a correlation with a similar stratigraphically supported development of the *p'ing* in Pan-p'o culture sites.¹⁵⁾ The development of the bird is the most questionable of all, logical and persuasive as his argument may at first seem: in the first place there is no reason to interpret his stage V design as related to a bird, since combinations of dots and hooks constitute a pattern in its own right, used frequently on the outer surface of small bowls. It is both plausible and possible that the bird developed from a corpulent, detailed one to one elongated and less detailed, but it is equally possible that a reverse development could have taken place from a simple to a more detailed depiction, or for that matter that contemporary artists drew birds in different ways.

On the other hand, Su's explanation of the development of the rose pattern I believe to be essentially correct. First of all, his stage IV corresponds well to the *p'en* from Miao-ti-kou H 338 (Figure 164), which is stratigraphically below and earlier than the *p'en* from H 322 (Figure 165), whose disintegrated design is closest to Su's rose type V which he places in his fourth or latest period. Secondly

the changes in the 'rose' design, if one is to believe the chart (Figure 161, center), are accompanied, at least at Ch'üan-hu-ts'un, by alterations in the *p'en* forms themselves of a rather dramatic sort, which however he does not discuss. The compact stage III 'rose' design is found on a low *p'en*, which has a rim that curves slightly down; stage IV is on a far taller *p'en*, which has a much heightened lower portion and whose rim curves downward to a lesser degree. Stage VI has an even higher base, and its shoulder for the first time protrudes farther out than the rim, which itself no longer curves downward at all.

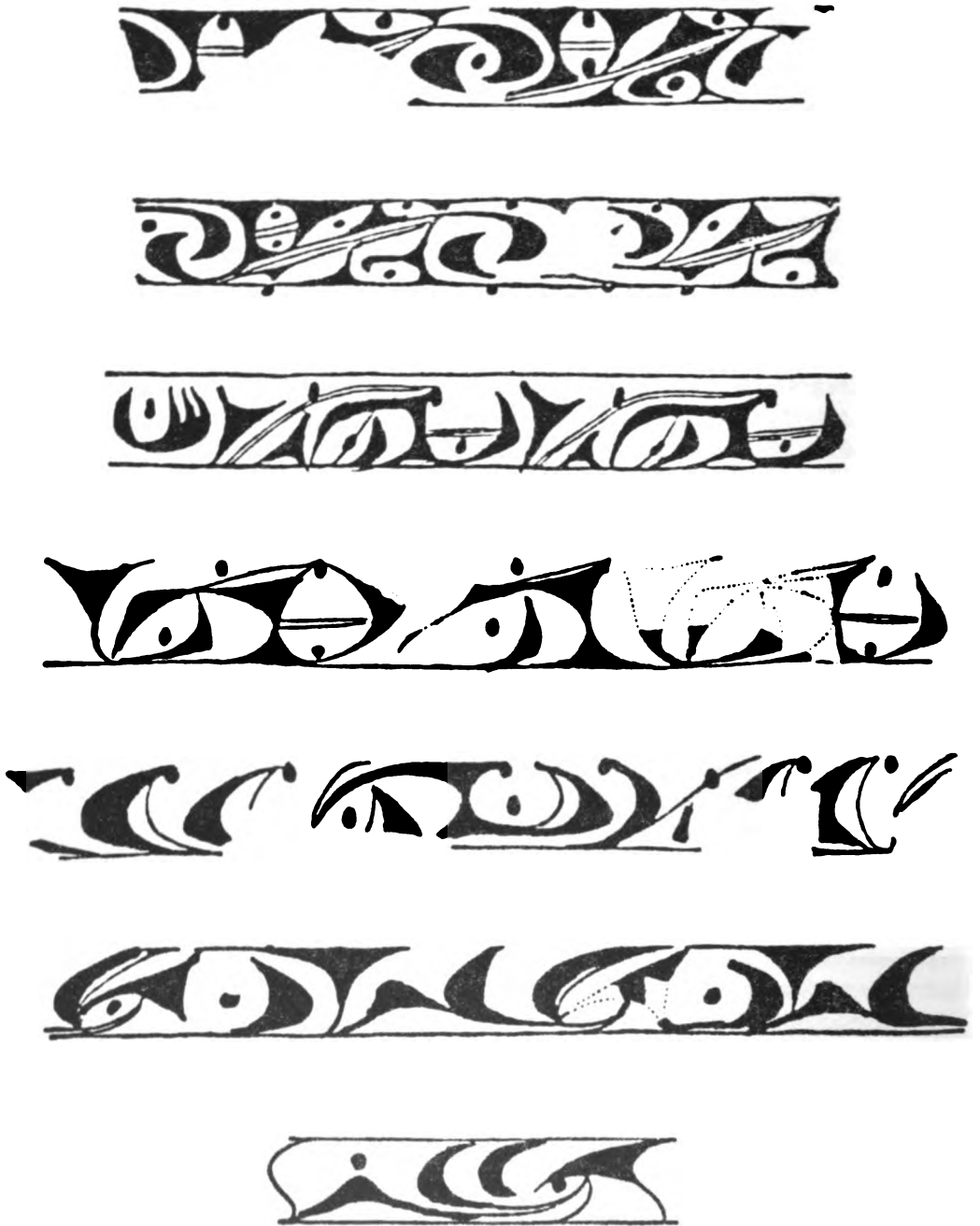
Such typological distinctions are not particularly apparent at Miao-ti-kou, as most of the *p'en* found there are relatively similar in shape. Nevertheless, the distinction does seem to be generally valid. To my knowledge there are no vessels with high bases that exhibit the early 'rose' design and very few more shallow *p'en* with late designs. Moreover, Su's view that the later *p'en* tend to be taller, combined with Yen Wen-ming's notion that the bases of the later vessels are more pronouncedly concave in profile, ultimately reveals that it is the earlier Miao-ti-kou *p'en* that are most similar in shape to those from Ma-chia-yao. This particular observation about the chronological development of the Miao-ti-kou *p'en* thus coincides with our proposition that the early Miao-ti-kou style is based upon Ma-chia-yao.

However, whereas Su's understanding of the evolution of the 'rose' pattern may be basically accurate, it involves one major fallacy: the designs have nothing whatever to do with floral motifs; they are in fact derivations from spirals.¹⁶⁾ The temptation to read these assuredly enigmatic designs as flowers was strongly reinforced in Su's mind by the coincidence that these motifs are characteristic of Hua-hsien (among other places, of course) where for instance the site of greatest interest to him—Ch'üan-hu-ts'un—is located. Hua, as he notes, is an ancient name for the Chinese people and is intimately connected in legend to the Hsia. Thus it was tempting for him to suggest that the 'floral' designs of the Miao-ti-kou/Ch'üan-hu-ts'un type gave to the area in which they flourished the names Hua-hsien, Hua-shan and Hua-yin.¹⁷⁾ But the Miao-ti-kou culture is now known to have existed too far back in time to be equated with the Hsia, the dynasty said to be directly antecedent to the Shang,¹⁸⁾ and it is unclear when or for what reason these locations were named Hua.

To consider the designs of which he speaks as 'floral' is the very misconception that thwarts Su from grasping the correct relationship between his 'roses' and 'chrysanthemums.' Whereas the distinction he draws between 'roses' and 'chrysanthemums' involves a certain validity, it will be shown that the 'chrysanthemums' in fact follow directly upon his stage of the dissolved 'rose' (stage VI). His insistence upon reading the designs as floral additionally prohibits his understanding of the exact relationship between these designs and those from Ma-chia-yao, although he indeed remarks upon the close similarity of these two pottery traditions.¹⁹⁾

Diagram 4:

The degeneration of the Miao-ti-kou spiral design



We have previously illustrated the development of the spiral at Ma-chia-yao and its transformation at the hands of the Wei river artists, and we have explained how the spiral is converted from an essentially linear configuration to a format in which the spiral is made to appear in reserve. It is the latter phase of the spiral and the rather backhanded, complex, abstract and formulaic way in which it was executed that was adopted by the Miao-ti-kou artists. We might review, briefly, how the earlier spiral designs at Miao-ti-kou (p. 55 Diagram 3) were executed. As a first step, pairs of crescentic arcs, which embrace a central dot, or nucleus, were inscribed. Second, the spiral arm or diagonal was added, connecting the tip of the left upper crescentic arc to the right tip of the lower arc. Third, a line was drawn congruent to the outline of the upper arc, which then moved upward, parallel to the diagonal. The resulting segmental triangles were further subdivided and the interstices filled in. The result is a compelling design, depending not upon calligraphic line as was the case with Ma-chia-yao spirals, but upon the graceful choreography of broader, more substantial bodies in reserve, moving against a darker ground. Of this the early phase of Miao-ti-kou spiral designs, we have unfortunately few examples (Figures 159, 162). It is to be hoped that future excavations will reveal more, and that these impressively beautiful configurations can come to be more fully known.

The highly schematized method of producing these patterns coupled with the fact that the spiral as such is not inscribed but appears almost mysteriously only as the last step of the formula is completed, caused the artist gradually to lose his grasp of the fact that the purpose of his formula was the creation of a spiral.

In time, the formula, applied in an ever more simplified, random and, indeed, carefree manner, led to designs whose reference back to Ma-chia-yao and indeed to spirals per se becomes more and more remote (Diagram 4). In a second example from Miao-ti-kou (Figure 163, Diagram 4b) we see a design closely identical to the one we have just described, and produced certainly by the same formula. What makes the design more difficult to read, and at the same time indicates a lack of focus on the part of the artist is the fact the dots have inadvertently been omitted from the nuclei of the spiral. The spirals thus have no clear center, and what results are curvilinear bands in reserve twisted back upon themselves. As the spiral is more and more lost sight of, the formula itself is applied in an ever more arbitrary fashion. In one example (Diagram 4c), for instance, the diagonals remain in evidence, with segmental triangles still inscribed above and below them; these diagonals, however, no longer join spirals, but reach from the lower border to the top of a partially inscribed oval bisected horizontally by three parallel lines.

Similarly, on the *p'en* from Miao-ti-kou H 338 (Figure 164, Diagram 4d) the last thin remnant of the diagonal attaches from the upper part of one 'spiral configuration', not to the next spiral, but to the top of an adjacent oval that has grown enormously in size since our first encounter with it. By now the concept of

the running spiral is completely lost. In other words, the formula has begun to fail to produce the spiral it was intended to do. At best there remain discrete spiral-like units, bands curving about a central 'nucleus.'

A still further stage in the dissolution of the spiral is represented on a *p'en* (Figure 165, Diagram 4e) from H 322 (which cut into H 338). Here only part of one spiral configuration remains, and its spiral arms, or what is left of them, lead nowhere. The design to the contrary is composed primarily of the crescentic arcs, once used to form the spiral, laid out in parallel sequence. From another ashpit, H 379 (Figure 166, Diagram 4f), whose lateness is avowed by the series of pits underlying it, comes another *p'en* which may be assigned to the same decadent phase. In this case, large, partially inscribed ovals in reserve remain, while the rest of the surface is covered by a loosely organized arrangement of segmental triangles and concentric arcs.

The final stage (Diagram 4g) brings us precisely to Su Ping-ch'i's 'chrysanthemums' where all traces of the spiral and of the ovals, once used to fill the segmental triangles above the diagonals, vanish, and what remains are merely crescentic arcs and occasional dots. The only reasonable explanation for the 'chrysanthemum' design is that it presupposes and derives from the negative spiral, the crescentic arc and hooks being merely simplifications of the same elements that were long established and a myriad times reproduced in working out the spirals.

Thus the obsession on the part of the Miao-ti-kou artists with the various configurations used to create the negative spiral led, in the end, to a shift away from reserve patterns and towards a delight in the rhythmical values of the painted figurations themselves. In time the designs become more open, the painted forms more assertive and energetic, and an altogether new and refreshing sense of freedom is in evidence (Figure 167). The later Miao-ti-kou artists rejected the formulaic method of producing spirals in reserve and treat only aspects of the formula itself, which are intended to be read positively. The areas in reserve have returned to the role they long ago held at Ma-chia-yao, being now solely unpainted surface. The painted designs of the late stage are of an entirely abstract nature, having been originally mere outlines of discrete spiriform designs, and they possess no representational attributes whatever.

The decline of the spiral might have had a singularly debilitating effect upon the Miao-ti-kou pottery, had not the artists in the meantime built up a substantial repertory of secondary designs. But these designs, although they still cover the surface in a lively manner, inevitably lack the momentum of the spirals. Of these secondary designs two are most important: floral-like designs (Figures 168–169) and ones consisting of circles subdivided by segmental triangles (Figures 170–171). These two designs are based upon the same type of structuring employed in the production of the spirals themselves, and the origins of both designs are traceable in some form as far back as the Wei River Transitional Style. On the

outer surface of red ware bowls from Ma-chia-yao and on others from the Wei River area (Figures 137–139) we find a curious design based upon the use of segmental triangles: here two dots are drawn at the top and bottom borders of the design; a segmental triangle is drawn from one dot to the other and then reaches back diagonally leftward to the lower border; a second segmental triangle is drawn on the right side from dot to dot and then moves toward the upper border. What results is an oval in reserve with pinched ends, framed by two elegant segmental triangles, similar to those which served as fillers in normal Ma-chia-yao spiral configurations.

We meet the mature forms of these 'floral' designs in Shansi and Honan. The pattern on a *p'en* from Ching-ts'un in Shansi (Figure 168), unlike that from Kansu, is constructed in two tiers: pairs of ovals, one above the other, are formed by the concave sides of two segmental triangles; one segmental triangle reaches from one oval to the top of the next, while the second reaches back to the bottom of the next oval to the left. The result is a design of vertically paired ovals in reserve connected by various more or less leaf-like shapes widening and contracting, also in reserve. It seems evident that in neither technique, nor in intent, have even these designs anything to do with floral motifs, as has often been maintained.

This design as it appears at Miao-ti-kou (Figure 169) acquires a considerably more floral-like appearance, but it is structured in basically the same way, although with certain differences. The designs on one Miao-ti-kou *p'en* consist of vertically paired ovals as at Ching-ts'un, which, however, alternate with single ovals. The introduction of the single ovals means that the web of segmental triangles inscribed about the upper of the paired ovals join, not to the bottoms or tops of other ovals, but to single dots, thus resulting in a pattern of reserved leaf-like shapes that seem to radiate out from a central dot, assuming thereby, quite fortuitously, the appearance of flowers. Another factor contributing indirectly to this new look is the elimination of the paired, more or less vertical, lines which in the Ching-ts'un example bisected the ovals.

The second pattern (Figures 170, 171)—that of adjacent circles in reserve subdivided by back-to-back segmental triangles—is constructed on the basis of similar principles, but the exact method of construction is different and the concept more simple: a series of ovals are outlined one after the other around the body of the vessel; two parallel horizontal lines divide the oval in half; segmental triangles, each utilizing one of the horizontal lines as one of its sides, are drawn so that the peaks of the triangles touch, respectively, the top and bottom of the oval. The segmental triangles are painted in black, as is the area surrounding the ovals. No doubt, by some far stretch of the imagination these designs, too, can be read as floral in nature: they can be seen as sets of four leaf-like shapes in reserve emanating from a central dot. This, however, was not the intention, as the method of construction adequately illustrates. That these designs are purely

geometrical is demonstrated in other examples in which each oval with its back-to-back triangles is forcibly separated from others by vertical bands (Figure 171), and by other instances in which the circles appear as single units in the context of spiriform designs (Figure 167).

Even the minor designs are executed in much the same way. The horizontal bands of crescentic arcs in reserve, often embellished by a dot with two lines streaming from it (reminiscent of similar motifs on Ma-chia-yao vessels, Figures 116, 119), are frequently bordered by the blacked-in segmental triangles. The pattern of hemispheres in reserve with crescentic arcs above²⁰) again employs the segmental triangle at the upper corners of the design; but the design in this instance seems to be a pure Miao-ti-kou invention, and any series of these motifs is frequently interrupted by additions of straight-sided triangles or a trellis pattern. These more simplified and static motifs—crescents in reserve, straight-sided triangles and the trellis—were to outlive all the other more complex and compelling designs and to survive until the termination of the Miao-ti-kou style.

2 The Miao-ti-kou Distribution and its Chronological Significance: Shensi, Shansi, Honan

Remains of the Miao-ti-kou painted wares are from a geographical point of view extremely widespread, reaching as far south as the Wu-han area of Hupei,²¹) and as far north as Inner Mongolia;²²) they extend from Kansu²³) to Kiangsu²⁴) in the east. Without exception, however, the Miao-ti-kou pottery in these more distant regions occurs not in a Miao-ti-kou cultural complex, but in distinctly local contexts where it is recognizably intrusive in nature. The center of the Miao-ti-kou culture, on the other hand, includes the areas of Shensi, Shansi and Honan, and is represented by terrace sites along the Wei River and its tributaries in Shensi, the lower Fen in southwest Shansi, and by sites along the Huang-ho continuing into eastern Honan.

The Miao-ti-kou pottery within this central area exhibits considerable variation, and the question must be posed whether these differences are chiefly attributable to local styles, or whether they indicate distinctions of a chronological nature. I incline toward the latter view. The information presently available suggests that an early stage of the culture is to be found farthest west—primarily in Shensi—while a middle stage is reflected predominantly in Shansi and the northwest corner of Honan. The latest phase, on the other hand, is in evidence primarily along the Huang-ho in central and eastern Honan. Whereas, indeed, certain variations of a local, rather than chronological, type may occasionally be noted, the Miao-ti-kou culture can be tentatively categorized as follows:

Early Stage

Shensi

Pin-hsien, Hsia-meng-ts'un
Hsi-an, K'o-hsing-chuang I
Hsieh-tzu-ling
Pan-p'o
Hua-hsien, Liu-tzu-chen

Middle Stage

Shansi

Jui-ch'eng-hsien, Hsi-wang-ts'un
Wan-ch'üan-hsien, Ching-ts'un
Yüan-ch'ü-hsien, Hsia-ma-ts'un
Hsia-hsien, Hsi-yin-ts'un

} traces of
late stage

Honan

Shan-hsien, Miao-ti-kou I
Mien-ch'ih-hsien, Yang-shao-ts'un
Lo-yang, Chung-chou-lu
Yen-shih, Miao-wan

} mixture of
middle and
late stages

Late Stage

Honan

Kuang-wu-hsien, Ch'in-wang-chai
Ch'ih-kou-chai
Cheng-chou, Ta-ho-ts'un

Farthest to the west is the Shensi Pin-hsien site of Hsia-meng-ts'un,²⁵⁾ where as we have noted previously, Miao-ti-kou pottery (from H 14) was found stratigraphically above that of Pan-p'o type. A comparison of the forms of the Miao-ti-kou and Pan-p'o wares at Hsia-meng-ts'un supports our theory that the potters who first adopted the spiriform decor and introduced their version of it to the Chung-yüan were likely associated with some branch of the Pan-p'o culture.

The principal Miao-ti-kou forms seen at Hsia-meng-ts'un are the following: the *po* (Figure 172); the cord-impressed, gourd-mouth *p'ing*; a surprisingly elegant *kang*, its sides tapering in straight lines to its very narrow base (Figure 174); and several different types of *kuan* (e.g. Figure 173). Nearly all these forms have predecessors in the Pan-p'o level at Hsia-meng-ts'un. Furthermore, one *po* from the Miao-ti-kou level is decorated not with spirals, but with a design reminiscent of Pan-p'o designs found at Pao-chi.²⁶⁾ It is likely that the earliest phase of the Miao-ti-kou tradition is yet unexcavated, but that with the Hsia-meng-ts'un finds we are not too far from this style, although the designs here are not of a high quality.²⁷⁾ Two of the vessels from H 14 are painted with an early form of the reserve spiral (Figures 172, 173), and in no case do they exhibit the 'floral patterns' or the ovals bisected by segmental triangles that were employed by the Miao-ti-kou craftsmen.

As we move eastward, we come next to the Hsi-an area. Yang-shao finds at K'o-hsing-chuang I were quite limited.²⁸⁾ The pottery nevertheless clearly belongs to the Miao-ti-kou style and in almost all regards is comparable to what we have seen at Hsia-meng-ts'un. Foremost is the top section of a *kang*, identical to the type from Hsia-meng-ts'un; and the spiral designs as they appear on the outer surfaces of bowls are of the early type, while the typical secondary Miao-ti-kou designs seem not to be present.

Fragments of a single and particularly splendid vessel found at Hsieh-tzu-ling near Ch'ang-an (Figure 159) retain the distinctive early reserve spiral, with the arms of fluctuating width sweeping about the nucleus in the manner of long ribbons. The design is further embellished by the use of vertically paired ovals, while the apparently shallow base of this vessel suggests that it may belong to a not any more advanced stage than does the Shensi ware so far discussed. The Miao-ti-kou sherds from Pan-p'o-ts'un²⁹⁾ would seem to belong to approximately this same early phase of the tradition, and they betray no suggestion of the secondary motifs.

The mature phase of the Miao-ti-kou culture is concentrated within a geographical area defined by a triangle, the western tip marked by Hua-hsien in Shensi, the northern apex by Wan-ch'üan in Shansi and the eastern tip by Lo-yang in Honan. Along the Wei-shui eastward from Ch'ang-an lies the Hua-hsien site of Liu-tzu-chen,³⁰⁾ where the excavators uncovered numerous graves, ashpits, kilns and the foundation of at least one dwelling. The repertory of ceramic forms is extensive, including the cord-impressed, flat-bottomed gourd-mouth *p'ing*; a *kang* of proportions similar to that from Hsia-meng-ts'un but softer in profile; and vast numbers of painted ware bowls, either with everted rims or rimless. The designs range from the relatively early spiral with inset ovals to the degenerate spiral composed of hook-like crescentic arcs. In addition occur the secondary motifs, among them horizontally laid out rows of circles subdivided by mirror-reversed segmental triangles. Thus the Hua-hsien area would seem to conform to a sort of middle period in the evolution of the Miao-ti-kou tradition, from the stage of discrete reserve spirals to that of degenerate spirals and the invention of the secondary motifs. The more simple and static patterns associated with the region of Honan east of San-men-hsia are apparently not in evidence. By contrast to what we know of the neighboring Hua-hsien site of Ch'üan-hu-ts'un, so often referred to by Su Ping-ch'i, the wares from Liu-tzu-chen betray a certain local flavor, which may be signified in part by the presence of isolated bird motifs.

In Shansi the greatest concentration of painted pottery sites lies in the southwest corner of the province near the confluence of the Fen and Huang rivers. Three series of excavations took place between 1958 and 1960 at the sites of Feng-ling-tu and Hsi-wang-ts'un in Jui-ch'eng-hsien.³¹⁾ At a number of localities, pottery of the Miao-ti-kou type was reported, including red ware *p'en*,

po, *kuan*, *weng* and *p'ing* forms. Of this material only drawings of five vessels were illustrated in the original report, and a subsequent publication³²) of the Hsi-wang-ts'un site added little of note. In the original report fragments of four *p'en* with everted rims and one evidently broad-bodied *p'ing* reminiscent of that from Hsia-meng-ts'un are represented. The designs include degenerate spirals with interspersed bird-like motifs (suggesting a connection with the neighboring Liutzu-ch'en).

If the vessels, both in shape and design, fit easily into the middle period of the Miao-ti-kou tradition, the designs betray a certain lack of understanding of the main tradition and a tendency to lapse into small discrete motifs out of keeping with the normal, highly systematic and complex patterning of the Miao-ti-kou style. The design on a vessel from a site slightly to the north of Feng-ling-tu³³) seems all the more awkward, based upon a series of reserve diagonal lines on either side of which are painted clumsy segmental triangles. This vessel was either painted by an unskilled craftsman or by an artist at some distance from the central Miao-ti-kou workshops.

No doubt representative of a major Miao-ti-kou settlement is the site of Ching-ts'un in Wan-ch'üan-hsien, again located not far from where the Fen and Huang rivers join. This site, long familiar in the West through the publication of Wu Gindling,³⁴) was excavated in 1931 by a joint expedition of the Normal College of Peking and the Freer Gallery of Art. The excavation lasted only six weeks, and during this time a survey was made of more than three acres. The original site report, as Wu has noted, is hopelessly unspecific. Only four painted ware vessels from Ching-ts'un have been published. Three of the vessels belong to the middle Miao-ti-kou stage, at a time when secondary motifs were being introduced. The fourth vessel decorated with a horizontal band of alternating ovals and diagonal lentoid shapes in reserve, also exhibits ovals filled with a trellis pattern. This vessel may be slightly later than the other three. Although in the case of Ching-ts'un one is forced to deal with drawings, for the most part of the vessels and their designs appear to be of high quality, suggesting that the 'metropolitan' Miao-ti-kou style penetrated at least this far north.

A site equal in importance to Ching-ts'un but considerably richer in its yield is that of Hsi-yin. The site was discovered by Li Chi in the winter of 1925-1926, and excavations were carried on over a six week period.³⁵) In all, twelve trenches, each two meters square, were dug; eight were completely excavated, four only partially. Little or nothing in the way of implements or human remains were revealed and no complete vessels; however, no less than 18,728 sherds were removed from Trench 4 alone, and of these more than 1000 were painted.

The range of designs characteristic of Hsi-yin is exceptionally large, encompassing relatively early discrete spirals, the late, wholly dissolved spirals and a wide range of secondary motifs. In addition are numerous examples of sherds showing the late simplified geometricized decor employing rows of

reserve segments, interwoven curving lines, and rows of short parallel vertical lines. The sherds from Hsi-yin vary in the quality of their painting, but most of those reproduced would appear to display a high level of workmanship. If the range of designs may be taken as a clue, it seems that this site was of longer duration, witnessing more changes in style than any other within the Miao-ti-kou tradition so far recorded in Shensi or Shansi. The presence of the sherds with simplified decor*) furthermore indicates that Hsi-yin may have outlasted the Miao-ti-kou site itself.

The site of Hsia-ma-ts'un is located on the northern bank of the Huang-ho, forty kilometers southeast of Yüan-ch'ü-hsien.³⁷⁾ Of the eight complete vessels unearthed in 1957, four, including a *p'en* (Figure 176), two *kuan* (Figures 177–178), one with a short neck, the other with a low rolled rim, and a narrow, flat-bottomed, gourd-mouthed *p'ing* (Figure 175) are painted. The latter displays a relatively simple form of the reserve spiral, free of the secondary motifs. On the *p'en* is a more advanced spiral, embellished with enlarged ovals bisected by two parallel lines; this *p'en* is indistinguishable from those produced by the Miao-ti-kou workshops. By contrast, the designs on the two *kuan* have the air of improvisations. One design is composed of segmental triangles embracing ovals that are subdivided by horizontal lines and bear a circle with a central dot within them; the other design is based upon a series of four circles in reserve, placed equidistant from each other around the mantel, each cut into pie-like slices by radial lines; the rest of the surface is divided up by painted-in segmental triangles arranged in a somewhat random fashion with leaf-like shapes, many marked by a single dot, remaining in reserve. The artist who created these two designs, surely trained in the Miao-ti-kou tradition and deeply familiar with that prescribed method of painting, nevertheless applied the formula in an unusually personal manner.

These two *kuan* found at a site close to the easternmost extension of the triangular area in which finds representing the mature phase of the Miao-ti-kou culture are concentrated, display a local flavor, much as did those from Liu-tzu-chen in Shensi that marks the westernmost point of this triangle. On the basis of the archaeological finds to date, then, we may tentatively conclude that the heart of the mature Miao-ti-kou culture lay within a triangle whose approximate center is present-day Hsia-hsien. This no doubt would once have been grist for the mills of those who would have equated the Miao-ti-kou culture with the people called Hsia. Clearly at any rate, this area was the center of a vast and influential culture.

The most famous painted ware site east of Miao-ti-kou is Yang-shao-ts'un, fifteen kilometers north of Mien-ch'ih-hsien, excavated by Andersson in 1921.³⁸⁾ It was the first site at which the neolithic painted ware was discovered and it was, of course, due to this particular happenstance that the entire period of the painted pottery traditions came to be called 'Yang-shao.'

The painted pottery unearthed at Yang-shao-ts'un can be divided into two

types. The first (Figure 179) is a mere extension of the Miao-ti-kou ware displaying degenerate spiriform décor and the numerous secondary motifs, painted in black on the usual red surface. New, however, is the application in red and black pigment of the more abbreviated and static Miao-ti-kou patterns to a surface covered with white slip (Figures 180–181). Attributable to the same phase that witnessed this novel handling of Miao-ti-kou decoration, are grey ware bowls³⁹⁾ and a standardized form of the *kuan* jar, oval in shape, contracting towards a narrow base and with a somewhat upturned flaring brim. These bowls and *kuan*, differing significantly in their decoration from anything hitherto excavated within the area of Miao-ti-kou tradition, inevitably bear beneath the rim a trellis band bordered below by a series of three or four circumferential lines. On the bodies of these vessels are inscribed additional isolated motifs of interlocked back-to-back C's, horizontally oriented ∞ -curves, whorl designs or hooks. These motifs are sparingly applied and painted either in black or in red. Almost certainly this style, composed of white-slipped wares painted in red and black and the grey ware *kuan*, postdates the true Miao-ti-kou phase at Yang-shao-ts'un and should properly be classified as the Miao-ti-kou/Yang-shao-ts'un phase. Unfortunately no stratigraphical evidence to support this conclusion was reported by Andersson—the stratigraphy at Yang-shao-ts'un having anyway been severely disrupted by erosion.⁴⁰⁾

The same general type of finds, late Miao-ti-kou ware associated with designs painted on white slip and grey ware vessels, characterize many of the sites in the Mien-ch'ih area excavated subsequent to Andersson's discovery and sites further to the east such as those along the Chung-chou-lu near Lo-yang.⁴¹⁾ The Miao-ti-kou/Yang-shao phase, however, is best exemplified by the material from the Kuang-wu-hsien (formerly called 'Ho-yin') sites of Ch'in-wang-chai and Ch'ih-kou-chai, uncovered under the auspices of Andersson,⁴²⁾ and from the Cheng-chou site of Ta-ho-ts'un discovered in 1972.⁴³⁾

The Kuang-wu-hsien finds were made in 1922 by Andersson's 'collectors' Yao and one Pai Wan-yü; the sites were never visited by Andersson, and since the survey map was produced on the basis of Mr. Pai's recollection, there is even doubt as to the exact location of the sites. The painted designs in brick red and black at both Ch'in-wang-chai and Ch'ih-kou-chai were inevitably found on sherds of red ware vessels that had been coated with a chalky white slip (Figures 182–184). Most conspicuous are the narrow registers with segmental areas in reserve separated by black horizontal lines filled by ovals curiously fringed as if they had eye-lashes. The grey ware *kuan*, with trellis band and isolated curvilinear motifs, are also prevalent.⁴⁴⁾

The more recently excavated site of Ta-ho-ts'un, twelve kilometers north of Cheng-chou, marks the easternmost extension of the Miao-ti-kou/Yang-shao-ts'un phase, and it is by far the most instructive site representing this phase. Here four 'row houses' each sharing one lateral wall with the next adjacent house were

uncovered. The houses, although broken into by later Lung-shan age ashpits, were by and large undisturbed. Within two of the houses, F 1 and F 2, were found sizable assemblages of pottery.

Most significant was the large red ware *po* (Figure 185) with a broad evenly rounded shoulder and a base exceedingly elongated by contrast to its earlier Miao-ti-kou counterpart. The shoulder is coated with a white slip and the décor divided into two horizontal registers. The one above bears three segments in reserve embellished with a cryptic motif composed of a sort of elongated curve-sided triangle, or bracket, above which is a horizontal line with a fringe of the type familiar from the Mien-ch'ih and Kuang-wu pottery. The 'bracket' is affixed to the lower border by a red dot. Each of the three segments is separated from those adjacent by a series of two black, straight-sided triangles touching a red diamond between them. The lower register is composed of back-to-back segments in reserve connected by a red dot, each pair separated from the next by four vertical black lines. This vessel, if indeed a magnificent specimen, is somewhat harsh or acerbic in character, and the décor, by contrast to the original Miao-ti-kou designs from which it derives, is quite straight-forward. Accompanying this tall *po* is a conventional grey ware *kuan* (Figure 186) with trellis band, and beneath a single serpentine motif  with a central dot.

Altogether unheralded within any of the aforementioned Miao-ti-kou sites are many of the other vessels found in the Ta-ho houses. One, an oval-bodied *hu* (Figure 187) with a tall conical neck is recognizably integrated into Miao-ti-kou parlance only by the presence of black segments standing on their tips. In shape and in the rest of its design, it is unprecedented among known Chung-yüan vessels. Even more peculiar is a twin-bodied *hu*,⁴⁵ the likes of which had not been seen before. Yet the remainder of the vessels, unpainted *tou* and *ting* forms (Figures 188–189),⁴⁶ should come as no surprise; they are normal Lung-shan types, and that they should appear at a late Miao-ti-kou site is fully to be expected. But the meaning of the occurrence of these three forms—the *hu* (Figure 187) and the *ting* and *tou*—at Ta-ho-ts'un is a topic to which we shall return.

The Ta-ho-ts'un site gains in significance due to the carbon-14 dates adduced for it from specimens of charcoal taken from F 2. If these dates can be trusted,⁴⁷ we may determine that by the end of the third millennium B.C., the Miao-ti-kou phase in Honan was at its end, and the Lung-shan stage that was to supplant it was already in evidence.

Notes to Chapter V

¹⁾ Yen Wen-ming, *KKHP* (1965/2), 49–78. Shih Hsing-pang tried to show the evolution of the Miao-ti-kou designs from bird figures and he tried the same thing with Ma-chia-yao spirals; see *KK* (1962/6), 318–328; in neither case is his development at all convincing.

²⁾ An Chih-min et al., *Miao-ti-kou yü San-li-ch'iao*, Archaeological Monographs, Series D, no. 9 (Peking, 1959), p. 104.

³⁾ Yen Wen-ming, *KKHP* (1965/2), 50 ff. For map of T 3, see *Miao-ti-kou yü San-li-ch'iao*, pl. XCV.

⁴⁾ Yen Wen-ming, *KKHP* (1965/2), 50; 55, fig. 1; 56, fig. 3.

⁵⁾ *Ibid.*, p. 59.

⁶⁾ *Ibid.*, pp. 54 ff.

⁷⁾ *Ibid.*, pp. 56–58.

⁸⁾ Su Ping-ch'i, *KKHP* (1965/1), 51–82.

⁹⁾ *Ibid.*, p. 57.

¹⁰⁾ *Ibid.*, pp. 57–59.

¹¹⁾ *Ibid.*, pp. 59–60.

¹²⁾ *Ibid.*, p. 59.

¹³⁾ *Ibid.*, p. 61.

¹⁴⁾ *Ibid.*, p. 60.

¹⁵⁾ *Ibid.*, pp. 64–66.

¹⁶⁾ A not dissimilar confusion in reading the Miao-ti-kou designs afflicted G. D. Wu. Wu noted that the “designs sometimes are based on a peculiar principle, in which the painted area and the blank spaces are made complementary one to the other.” But he goes on to say, “A careful study . . . will lead us to recognize the motifs, which are straight lines, parallel lines, crescents, and round spots. A number of these motifs are put together to make various designs” (G. D. Wu, *Prehistoric Pottery in China*, pp. 78, 82). Whereas Su Ping-ch'i equivocates as to whether the designs should be read as positive or negative, Wu tended to read them as negative.

¹⁷⁾ Su Ping-ch'i, *KKHP* (1965/1), 80–81. Su's idea is referred to in a noncommittal fashion by Chang Kwang-chih, *Archaeology*, p. 125. No doubt, however, as Su implies, Ch'üan-hu-ts'un is a more major Miao-ti-kou site than Miao-ti-kou itself.

¹⁸⁾ A discussion of legends about the Hsia is presented by Herrlee Glessner Creel, in *Studies in Early Chinese Culture*, First Series (Baltimore, 1937), pp. 97–131.

¹⁹⁾ Su Ping-ch'i, *KKHP* (1965/1), 76.

²⁰⁾ *Miao-ti-kou yü San-li-ch'iao*, pls. XIV: 2; XVI: 5–7; XVII: 1, 2–5.

²¹⁾ Chang Yün-p'eng, *KK* (1962/7), 339–344, pls. 1–3.

²²⁾ Wang Yü-p'ing, *KK* (1961/9), 10–13, 12, fig. 5.

²³⁾ J. G. Andersson, *BMFEA*, 15 (1943), pl. 59: 1.

²⁴⁾ Yin Huan-chang et al., *KKHP* (1964/2), 9–56.

²⁵⁾ *KK* (1960/1), 1–4, pl. 1; Li Shih-kuei, *KK* (1962/6), 292–295.

²⁶⁾ *KK* (1959/5), pl. 1: 2–3; *KK* (1960/1), pl. 1: 13.

²⁷⁾ A particularly puzzling vessel in this regard is a *p'en* in the collection of the Buffalo Museum of Science, published by Alfred Salmony in “Chinese Prehistoric Painted Pottery,” *Hobbies*, vol. 26, no. 1 (October, 1945), p. 66, figs. 1–2. Although there is no record of the provenance of the piece, Salmony considered it to be from Hsi-yin, Shansi. Ma Ch'eng-yüan in *Yang-shao wen-hua ti ts'ai-t'ao* (Shanghai, 1957), pl. 7: 2 reproduces the piece, but states that it came from Kansu. The *p'en* is a red ware vessel and its design is similar to Miao-ti-kou, but in shape and particularly in the handling of the paint, it distinctly recalls Ma-chia-yao. The design, however, is an aberrant type, yet it might conceivably have been executed during the earliest phase of the development of the Miao-ti-kou style.

- ²⁸⁾ Wang Po-hung et al., *Feng-hsi fa-chüeh pao-kao*, Archaeological monographs, Series D, no. 12 (Peking, 1962), pp. 17–19, pls. 1–3.
- ²⁹⁾ *Hsi-an Pan-p'o*, pl. CLXI: 2–22.
- ³⁰⁾ *KK* (1959/2), 71–75; *KK* (1959/11), 585–587, 591.
- ³¹⁾ Chang Yen-huang, Chang Tzu-ming, Ch'en Ts'un-hsi, *KK* (1962/9), 459–464.
- ³²⁾ *KKHP* (1973/1), 31–61, pls. 15–22.
- ³³⁾ *WWTKTL* (1954/9), pl. 4.
- ³⁴⁾ G. D. Wu, *Prehistoric Pottery in China*, pp. 80–83, pl. 29.
- ³⁵⁾ *Ibid.*, pp. 70–80, 82, pls. 26–27. The site was first published by Liang Ssu-yung, "New Stone Age Pottery from the Prehistoric Site of Hsi-Yin Tsun, Shansi, China," *Memoirs of the American Anthropological Association*, No. 37 (1930).
- ³⁶⁾ G. D. Wu, *Prehistoric Pottery in China*, pl. 27: 46–50.
- ³⁷⁾ Tai Tsun-te and Teng Lin-hsiu, *KK* (1963/5), 278–279; pl. 9.
- ³⁸⁾ J. G. Andersson, *BMFEA*, 19 (1947), 1–77, pls. 1–85.
- ³⁹⁾ *Ibid.*, pl. 43: 18–19.
- ⁴⁰⁾ *Ibid.*, pp. 19–23; Andersson, *Children of the Yellow Earth*, pp. 176–178.
- ⁴¹⁾ Su Ping-ch'i, An Chih-min and Lin Shou-chin, *Lo-yang Chung-chou-lu*, Archaeological monographs, Series D, No. 4 (Peking, 1959), p. 14: 3. An intermixture of Pan-p'o and these late Miao-ti-kou influences reached as far north as An-yang and to Han-tan in Hopei; see: Cheng Shao-tsung, *KK* (1962/12), 658–671; T'ang Yün-ming, *KK* (1964/9), 462–467, 471; Lo P'ing, *KK* (1965/4), 205–206; Yang Hsi-chang, *KK* (1965/7), 326–338. T'ang Yün-ming, *KK* (1974/6), 356–360; *KKHP* (1975/1), 73–87; also see Chapter IV, note 32. It is impossible to estimate a *terminus ante quem* for this distinctive provincial style, but it likely went on into Lung-shan times. This style seems to be loosely related to the painted pottery from Hung-shan-hou, Ch'ih-feng, Jehol. See K. Hamada and S. Mizuno, *Hung-shan-hou, Ch'ih-feng: Prehistoric Sites at Hung-shan-hou, Ch'ih-feng in the Province of Jehol, Manchuria*, Archaeologia Orientalis, Series A, vol. VI (Tokyo, 1938).
- ⁴²⁾ Andersson, *BMFEA*, 19 (1947), 109–124, pls. 127–149 and T. J. Arne, *Painted Stone Age Pottery from the Province of Honan, China*, Palaeontologia Sinica, Series D, Vol. 1, fasc. 2 (Peking, 1925).
- ⁴³⁾ Ch'en Li-hsin, *KK* (1973/6), 330–336, pls. 1–3.
- ⁴⁴⁾ Arne, *Painted Stone Age Pottery from the Province of Honan, China*, pls. VII: 18, 20; IX: 30.
- ⁴⁵⁾ Ch'en Li-hsin, *KK* (1973/6), pl. 1: 1.
- ⁴⁶⁾ *Ibid.*, p. 334, fig. 3: 1–4, 6, pl. 3: 2–3, 5.
- ⁴⁷⁾ It should be noted that the two carbon-14 dates available for F 2 differ considerably from one another (Hsia Nai, *KK* 1977/4, 229). The earlier of those dates (ZK 185) 3685 ± 125 B.C., ascertained in 1973 and mentioned in the original site report (Ch'en Li-hsin, *KK* 1973/6, 336), is perhaps the less reliable in so far as the later date (BK 76004) 3070 ± 210 B.C. more closely corresponds to yet a third carbon-14 date (BK 76001) of 3130 ± 190 B.C. for material associated with what is classified as 'late Yang-shao' remains at the same site (*ibid.*). Also see *KK* (1979/6), 558.

MIAO-TI-KOU DISTRIBUTION: SOUTHERN HONAN, HUPEI

One of the major regions peripheral to the Chung-yüan to which the Miao-ti-kou style of painted pottery was transmitted is that of southern Honan and Hupei, or basically the area south of the Huang-ho and north of the Yangtze drained by the Han-chiang. An analysis of the penetration of the Miao-ti-kou culture into this region will bring into focus some peculiar aspects of the Central China painted ware culture and of that phase of Lung-shan exemplified by Miao-ti-kou II, and we shall find ourselves, by necessity, at the verge of a reconsideration of the Lung-shan aspects of the Nuclear Theory.

The site of Chao-wan-ts'un northeast of Chen-p'ing represents an adjunct of the Miao-ti-kou culture in southwest Honan.¹⁾ There, atop a large mound some twenty meters high, a team of archaeologists uncovered the remains of three 'town houses,' sharing adjoining walls, and more or less similar to those brought to light at Ta-ho-ts'un. The cultural remains, considered coeval with the dwelling structures, consist primarily of sherds, many of which bear designs applied over a white slip. There is no mistaking that the painted sherds belong to the Miao-ti-kou tradition; most fall within the stage of the discrete spiral, with no published sherds exhibiting designs typical of the Miao-ti-kou – Yang-shao-ts'un phase. Of the unpainted vessels, the flat bottom *p'ing* and the trumpet-mouth *kang*-like vessel (a version of the *kang* seen at Liu-tzu-chen and Miao-ti-kou) are perfectly comprehensible within the Chung-yüan painted pottery tradition. By contrast, one notes certain aberrations from the Chung-yüan tradition: the extensive use of grey ware, the *ting* with small rounded feet, and, in particular, the numerous fragments of flat-sided *ting*-feet.

The complexity of the dwelling structures as well as the presence of the plough inclined the authors of the report to the view that Chao-wan is later than the painted ware levels in the Lo-yang and Cheng-chou areas and that it anticipates the wealth of pottery sites that were to follow it in the southwest.²⁾ However, it should be noted that the painted ware at Chao-wan represents a stage of the Miao-ti-kou pottery which is likely to be earlier than what we find at Lo-yang or Cheng-chou. Furthermore one should lay open to question the author's assumption that

the Chao-wan site in fact anticipates the typical Lung-shan cultures further to the southwest. An investigation of sites further to the southwest, where Miao-ti-kou elements are found in an alien context, may yield an explanation for the aberrant 'Lung-shan' forms, such as the *ting* legs, found at Chao-wan in the context of a site otherwise so closely in keeping with the Chung-yüan.

Among the many and widespread sites in southwest Honan and Hupei where the influence of Miao-ti-kou is felt may be listed: Hsi-ch'üan on the Tan-ho,') Yün-hsien,') the Ching-shan site of Ch'ü-chia-ling') on the lower Han-chiang and—considerably farther east—Lo-shih-shan') in Huang-kang-hsien. One of the more important is the stratified site of Ta-ssu') located ten kilometers west of Yün-hsien on the northern bank of the Han. The cultural remains at Ta-ssu, reaching the depth of two meters, are stratified into three successive levels, with Yang-shao on the bottom, Ch'ü-chia-ling in the middle, and Lung-shan on top. The Yang-shao level produced pointed-bottom *p'ing*, *p'en* and *po*, *ting* and *kuan* vessels, and a number of painted sherds employing designs painted in black and red. The author of the report concludes that the painted ware is in the Pan-p'o/Miao-ti-kou tradition. The forms, and particularly the designs, suggest that the pottery is to be equated with the late stage of the geometricized Pan-p'o ware that had begun to incorporate Miao-ti-kou elements; the designs look not unlike those from Tung-chuang-ts'un in Jui-ch'eng-hsien, Shansi.)

The second level at Ta-ssu is designated as belonging to the Ch'ü-chia-ling culture as typified by the eponymic site in Ching-shan. The pottery forms include the *ting*, *kuan*, *tou* and high foot *pei*, all said to be of the Ch'ü-chia-ling type. Of those vessels, only the high foot *pei* is illustrated; and there is at least no question but that this vessel is kindred to those found at Ch'ü-chia-ling. Similarities with stone and bone implements as well as egg-shell ware are also noted.9) Above the Ch'ü-chia-ling level is a third level classified as Lung-shan. Coarse grey ware and red pottery constituted the largest percentage of the sherds, accompanied by few pieces of black ware. The shapes include the *ting*, *tou* and a *li-ho*, considered by the author to show the influence of bronze vessels.10)

Five kilometers east of Yün-hsien is the site of Ch'ing-lung-ch'üan.11) This site covers an area of more than 400,000 square meters and the cultural deposits reach to a level of 6.5 meters. The excavation revealed two stratigraphic levels, with Yang-shao below the Ch'ü-chia-ling. At other sites in the nearby Chün-hsien area, such as Chu-chia-t'ai,12) a few kilometers to the south of the *hsien* city, and at Luan-shih-t'ai,13) to the east, the same types of artifacts were discovered.

The stratigraphy at the neighbouring site of Hsia-wang-kang in Hsi-ch'üan-hsien,14) excavated in 1971, is far more complex and even more revealing. It consists of no less than seven levels, which may be categorized on the basis of the pottery found within them as follows:

Early level No. 1	– Pan-p'o
Early level No. 2	– Late Pan-p'o – mature Miao-ti-kou
Middle level	– Ch'ü-chia-ling
Late level No. 1	– Ch'ü-chia-ling and Chung-yüan Lung-shan
Late level No. 2	– Chung-yüan Lung-shan, K'o-hsing-chuang II stage
Shang level	– Erh-li-kang stage
W. Chou level	

The archaeologist Chien Hsüeh-shan arrived at the following generalization: that in the Yün-hsien and Hsi-ch'uan area the stratigraphy repeated at the many sites sets up a chronological sequence with Yang-shao as the earliest, followed by Ch'ü-chia-ling and finally Lung-shan.¹⁵⁾ That this chronological succession of cultures took place seems a most solid conclusion. And surely, on the face of it, it seems convenient for those scholars who would see a gradual evolution from Yang-shao to Lung-shan forms: according to this theory, a sort of intermediary Yang-shao stage employing the *ting* in combination with the painted forms would give way to a pre-Lung-shan or 'Ch'ü-chia-ling' stage, followed by a full Lung-shan.

All this would be most reasonable were it not for one factor, which, due to its being published several years after Chien's article was written, was unavailable to him. With the publication of the Ch'ü-chia-ling monograph in 1965, it became clear that the Ching-shan Ch'ü-chia-ling site itself comprised not one, but three distinct levels following one another in temporal succession. The Ch'ü-chia-ling stage represented at the Yün-hsien and Hsi-ch'uan sites belongs exclusively to the late stage of Ch'ü-chia-ling at the eponymic site. Hence, the Ch'ü-chia-ling level at the Yün-hsien and Hsi-ch'uan area cannot—because it represents a late phase of the Ch'ü-chia-ling culture—be envisaged as transitional to the Ch'ü-chia-ling culture.¹⁶⁾ It is more reasonable, then, to surmise that elements from the Chung-yüan culture, which penetrated as far as southern Honan in a fairly unadulterated form, were adopted to some extent by peoples in Hupei who belonged to the northern extension of the Ch'ü-chia-ling culture.

The neolithic site of Ch'ü-chia-ling is located thirty kilometers to the southwest of Ching-shan in the northern part of the Chiang-Han plains. It was discovered in 1954; two seasons of excavations were subsequently undertaken. The second, a lengthy period, lasting from June 1956 to February 1957 resulted in the excavation of 858 square meters.¹⁷⁾ The cultural deposits, determined to be three meters in thickness,¹⁸⁾ were divided into three levels representing three distinct chronological periods.¹⁹⁾ An especially great difference was noted between the remains of the early and those of the two later periods. The chief differences are as follows: (1) In the early period the most conspicuous ware is black pottery with vermilion painting; in the two late periods the only painted ware occurred in the

form of spindle whorls. (2) There is a far greater variety of vessel forms in the late periods.²⁰⁾

The lower level representing the early period contained the remains of 24 ashpits and a single grave. The pottery included the black ware *pei*, *p'en*, *kuan* and a covered *ting*; vermilion painting on black ware is frequent, and some egg-shell ware is present.²¹⁾ The second stratum, called 'Late I,' revealed the foundation of one building, covering an area of 200 square meters, its floor fabricated of burnt clay tempered with rice husks. The presence of painted spindle whorls is noted, as well as a wider variety of vessel forms, and a definite increase in the amount of black pottery.²²⁾ In the third level, or 'Late II' period, were uncovered the remains of a square earthen terrace, tempered with rice-husks and surrounded by post holes. The arid and generally rather caustic nature of the Ch'ü-chia-ling pottery style becomes all the more pronounced. Forms include the *ting* with tall flat legs, bowls with low circular bases, *tou* with perforated stems, the small trumpet-mouth *pei*, the *pei* with broad cylindrical body set on a narrow flaring circular foot, and an uncouth so-called *hu* with broad cylindrical neck, a wide, sharply protruding belly and high flaring circular foot.²³⁾

Because of two sherds of 'Miao-ti-kou' type, unearthed from the lowest level, the early period at Ch'ü-chia-ling is believed to be roughly contemporary with the Chung-yüan Yang-shao, while the ware of the late periods is believed to have similarities to Lung-shan.²⁴⁾ The authors observe that "it is highly probable that the Ch'ü Chia Ling Culture is somewhat related to the Yangshao and Lungshan Cultures. For instance, the remains of its early period have yielded some painted pottery sherds similar to those of the Yangshao Culture while its egg-shell black ware and the *tou*-vessel with an openwork stem are both highly reminiscent of those found in the Lungshan Culture. However it was not until the late period that the characteristics of the Ch'ü Chia Ling Culture became particularly pronounced. An analysis of the artifacts seems to suggest that this culture is probably later in date than the early stage of the Lungshan Culture of the Yellow River valley but earlier than the Shang-Yin period."²⁵⁾

Chang Kwang-chih concurs with the conclusions stated in the Ch'ü-chia-ling monograph,²⁶⁾ while a somewhat different view is put forth by Judith Treistman, who has devoted considerable study to Ch'ü-chia-ling and the southern Honan sites. According to Treistman, "The so-called Yangshao culture of the upper Hanshui Valley does seem comparable with the Shensi Pan-p'o-Miao-ti-kuo [sic] sequence. It therefore represents a reasonable extension southward along a major communications corridor. However, the 'Lungshan' component is probably entirely historic, showing late Shang-Chou affinities. The intermediary Ch'ü-chia-ling is basically historic in time, although there may be continuity with late persisting local neolithic cultures."²⁷⁾

The fact of the matter is, however, that the Ch'ü-chia-ling culture cannot

belong, as Treistman would have it, to the historic period. Although it is impossible to calculate how long the culture may have survived in Hupei and Hunan, we know at least that in southern Honan it was replaced by the Chung-yüan Lung-shan of the K'o-hsing-chuang II phase.²⁸⁾ The bulk of the evidence suggests that not only is the early phase of Ch'ü-chia ling contemporary with the Miao-ti-kou I culture, as witness the painted sherds found there,²⁹⁾ but that the Late Phase II was probably contemporary with the Lung-shan phase represented by Miao-ti-kou II.

In the Yang-shao level at Miao-ti-kou there appear a number of forms that seem like novelties. They are as follows: the small *pei*; the lid with a long, pointed extension at the top; the tripod with broad flat legs; the circular stand; and the perforated conical knob of a lid.³⁰⁾ Of these forms, none are visible in the early level at Ch'ü-chia-ling. The *pei* occurs in Late Stage I, as does the *ting* with flat sided legs. In Late Stage II, the *ting* with flat legs continues; the lid with long pointed top, the circular stand and the curious perforated lid-knob all are in evidence for the first time.³¹⁾ None of these features, except the circular stand, are present at Miao-ti-kou II. On the other hand, the trumpet mouth *pei*, typical of Miao-ti-kou II, is, as An Chih-min pointed out,³²⁾ almost identical to that found at Ch'ü-chia-ling Late Stage II. Furthermore, the peculiar *li* vessel of Miao-ti-kou II with its strongly protruding belly³³⁾ is suggestive of the '*hu*' of similar silhouette at Ch'ü-chia-ling Late Stage II,³⁴⁾ but which is also known in earlier levels there.

Obviously the comparison of the Miao-ti-kou I and II forms with those from the various stages of Ch'ü-chia-ling leads to contradictions, for in the case of both Miao-ti-kou I and II the similarities are closest with Ch'ü-chia-ling Late Phase II. On the basis of archaeological materials now available, no firm conclusion can be drawn.

I incline to believe that Miao-ti-kou II and Ch'ü-chia-ling Late Phase II are roughly contemporary, as indicated by their carbon dates (ZK 111 2780±145 B.C. for Miao-ti-kou II and ZK 125 2695±195 B.C. for Ch'ü-chia-ling Late Phase II),³⁵⁾ and by the date for the Ch'ü-chia-ling level of the yet unpublished Hsi-ch'uan, Huang-lien-shu-ts'un site of 2730±145 B.C. (ZK 91),³⁶⁾ and that the two earlier phases at Ch'ü-chia-ling correspond roughly to Miao-ti-kou I. Thus communications between the two areas may have been maintained over a very long period of time. Contacts at an early stage may explain the Yang-shao sherds at Ch'ü-chia-ling and certain aberrant forms at Miao-ti-kou and may possibly have afforded some impetus for the introduction of rice culture, typical of Ch'ü-chia-ling, into the millet growing Chung-yüan region³⁷⁾ as evidenced by the rice husks found at Yang-shao-ts'un.³⁸⁾ It is possible that the trumpet-mouth *pei* and the particular silhouette of the *li* at Miao-ti-kou II are to be accounted for by contact with the late Ch'ü-chia-ling culture.

What sense would it then make to see the early level of Ch'ü-chia-ling as an extension of the Chung-yüan Yang-shao and the later phases as extensions of the

northern Lung-shan? In the early stage at Ch'ü-chia-ling is found a Chung-yüan sherd—but in the context of a culture employing the *ting* and the *tou* with circular perforated foot, neither of which occur in the Yang-shao level at Miao-ti-kou. We could hypothesize that as the Chung-yüan painted ware culture moved south (which apparently it did) it developed new forms, but it would be difficult to claim that these forms originated in the Chung-yüan. In the case of the early level at Ch'ü-chia-ling it would obviously seem more reasonable to assume that the Chung-yüan painted ware was imported, possibly from southern Honan, into a pre-existing culture that employed the *ting* and circular foot *tou*.

The strongest supporting evidence that as the Chung-yüan Miao-ti-kou civilization advanced into the south it met with pre-existing cultures is afforded not by Ch'ü-chia-ling, where the picture we gain is admittedly confused, but by the site of Lo-shih-shan,³⁹⁾ twelve kilometers to the north of Huang-kang, where four trenches were excavated between 1956 and 1957. In Trench 2 a Western Chou stratum overlies a neolithic level; the remains found in the other trenches are exclusively of neolithic type. Because of the presence of painted red and black egg-shell ware, the site is considered to be affiliated with Ch'ü-chia-ling and to belong within the same cultural sphere. In Trench 3 was excavated a rectangular grave containing eleven vessels (Figure 190), including six *ting* with broad flat legs and two black ware *tou* with perforated circular feet. Utterly distinct from the rest of the contents of this grave is a single red ware *kuan* exhibiting a Miao-ti-kou reserve spiral decoration. The *kuan* almost surely was imported from the north. The particular type of design fits comfortably within the middle Miao-ti-kou period; it was a type apparently extinct before the advent of the Chung-yüan Lung-shan phase. Consequently the highly developed *tou* and *ting* forms at Lo-shih-shan, presumably contemporary with the *kuan*, cannot be explained as deriving from the Chung-yüan Lung-shan; they must belong to a southern culture already in existence at the time the *kuan* was transported south.

Such an hypothesis does not involve an outright rejection of the Nuclear Theory, but simply a modification of it. Thus, as the Chung-yüan painted ware people moved into more southerly areas, they moved, not into a cultural vacuum, but into the territory of another culture. This southern culture in whose daily habits the *ting*, *tou* and *pei* played an integral role and who specialized in unpainted ware, black ware and egg-shell ware, no doubt has roots in a hoary antiquity and was extremely widespread, reaching to the eastern seaboard and into Ssuchuan.⁴⁰⁾ The Ch'ü-chia-ling aspect of this culture is represented in at least two areas of the Yangtze Valley: at Li-hsien⁴¹⁾ in northern Hunan and at Hsiu-shui⁴²⁾ in northwest Kiangsi. The late Ch'ü-chia-ling/Lung-shan phase at P'ao-ma-ling, Hsiu-shui, has been carbon-dated to 2810 ± 145 B.C. (ZK 51).⁴³⁾ The Ch'ü-chia-ling phase there overlies an even earlier level. At the Li-hsien site of Meng-ch'i, the upper level can be equated with the early phase of Ch'ü-chia-ling

on the basis of the characteristic form of the *ting* and the type of painted sherds; beneath this lies a still earlier level.

If any explanation of some of the Miao-ti-kou II pottery forms can be afforded by hypothetical contacts with specific phases of the Ch'ü-chia-ling aspect of this southern civilization, the normal Chung-yüan Lung-shan, which paved the way for the pottery forms known from the earliest Shang times at such sites as Erh-li-t'ou, is not accountable in the same manner. Any investigation of the Chung-yüan Lung-shan, as distinguished from that particular Miao-ti-kou II manifestation of it, must begin with a study of the penetration of the Miao-ti-kou painted ware into areas other than southern Honan and Hupei: namely Kiangsu and Shantung.

Notes to Chapter VI

- ¹⁾ *KK* (1962/1), 23–27. Remains of the Miao-ti-kou culture were also discovered, considerably to the northeast of Chen-p'ing, at the Lu-shan site of Ch'iu-kung-ch'eng; see *KK* (1962/11), 557–561.
- ²⁾ *KK* (1962/1), 27.
- ³⁾ *WW* (1972/10), 6–19.
- ⁴⁾ Chien Hsüeh-shan, *KK* (1961/10), 519–530, pls. 1–4.
- ⁵⁾ Chang Yün-p'eng, *Ching-shan Ch'ü-chia-ling*, Archaeological Monographs, Series D, no. 17 (Peking, 1965).
- ⁶⁾ Chang Yün-p'eng, *KK* (1962/7), 339–344.
- ⁷⁾ Chien Hsüeh-shan, *KK* (1961/10), 520.
- ⁸⁾ *KKHP* (1973/1), pl. 3.
- ⁹⁾ Chien Hsüeh-shan, *KK* (1961/10), 520.
- ¹⁰⁾ *Ibid.*, pp. 521–527.
- ¹¹⁾ *Ibid.*, p. 521.
- ¹²⁾ *Ibid.*, pp. 527–530.
- ¹³⁾ *Ibid.*, p. 530.
- ¹⁴⁾ *WW* (1972/10), 6–19.
- ¹⁵⁾ Chien Hsüeh-shan, *KK* (1961/10), 530.
- ¹⁶⁾ As Ch'eng Tê-k'un would have it; cf. *New Light on Prehistoric China*, p. 35.
- ¹⁷⁾ *Ching-shan Ch'ü-chia-ling*, p. 1.
- ¹⁸⁾ *Ibid.*, p. 4.
- ¹⁹⁾ *Ibid.*, p. 72.
- ²⁰⁾ *Ibid.*
- ²¹⁾ *Ibid.*, pp. 8–23.
- ²²⁾ *Ibid.*, pp. 24–39.
- ²³⁾ *Ibid.*, pp. 39–71.
- ²⁴⁾ *Ibid.*, p. 75.
- ²⁵⁾ *Ibid.*, p. 82.
- ²⁶⁾ Chang Kwang-chih, *Archaeology*, pp. 165–167.
- ²⁷⁾ Judith M. Treistman, " 'Ch'ü-chia-ling' and the Early Cultures of the Hanshui Valley, China," *Asian Perspectives*, XI (1968), 88.
- ²⁸⁾ *WW* (1972/10), 13.
- ²⁹⁾ One of the two 'Yang-shao' sherds from the early level (see *Ching-shan Ch'ü-chia-ling*, pl. I: 3) as well as one found in the latest level (pl. XLIV: 1) look curiously like Ma-chia-yao sherds.
- ³⁰⁾ *Miao-ti-kou yü San-li-ch'iao*, pl. XLI: 2–7; pl. XXXIII: 6; pl. XXXIX: 4; pl. XXXIV: 1–2; pl. XXXVIII: 4, respectively.
- ³¹⁾ *Ching-shan Ch'ü-chia-ling*, pl. XXI: 8; pl. XVII: 1–2,4; pl. XXXI: 1–5; pl. LIII: 1–2; pl. LIII: 6, respectively.
- ³²⁾ An Chih-min, *WW* (1950/10), 22.
- ³³⁾ *Miao-ti-kou yü San-li-ch'iao*, pl. LXII: 3–4.
- ³⁴⁾ *Ching-shan Ch'ü-chia-ling*, pl. XLIX.
- ³⁵⁾ Hsia Nai, *KK* (1977/4), 230.
- ³⁶⁾ *Ibid.*
- ³⁷⁾ Chang Kwang-chih, *Archaeology*, p. 138.
- ³⁸⁾ J.G. Andersson, *BMFEA*, 19 (1947), 22.
- ³⁹⁾ Chang Yün-p'eng, *KK* (1962/7), 339–344.

- ⁴⁰⁾ Shen Chung-ch'ang, Yüan Ming-shen, *WW* (1961/11), 15–21. Li Wen-chiao, *KK* (1979/2), 161–164, 185.
⁴¹⁾ *WW* (1972/2), 31–38; Kao Chih-hsi and Ho Chieh-kou, *KKHP*, 1979/4, 461–489, pls. 1–8.
⁴²⁾ *KK* (1962/7), 358–367.
⁴³⁾ Hsia Nai, *KK* (1977/4), 230.

PART THREE

EASTERN CHINA

Chapter VII

THE MIAO-TI-KOU DISTRIBUTION: KIANGSU

1 The Nuclear Theory and the Two Culture Theory

An effort to trace the Miao-ti-kou tradition beyond the Chung-yüan into the regions of the south and southeast inevitably brings one to grips with the problem of the relationship of the Central China painted pottery culture and the so-called Lung-shan tradition. When the Lung-shan pottery was first brought to light in 1928 at Ch'eng-tzu-yai in Shantung,¹) it was regarded as a tradition independent of the painted ware, the former localized in the east and the latter in Central China. Since then, numerous Lung-shan pottery sites have been discovered in Central China where invariably they appear stratigraphically above the painted pottery finds and must, hence, be regarded as later in date. Most notable was the discovery of Miao-ti-kou II, the Lung-shan level at the site overlying the stratum that contained painted ware.

As a consequence of such finds, the old Two Culture Theory was rapidly abandoned. It was superseded by a second theory, which asserts that the Lung-shan tradition was not only chronologically later than the painted pottery tradition, but that it grew out of it in a direct evolution. This proposition rests primarily upon the observation that the Miao-ti-kou I phase included certain vessel types, such as the small *pei*, which were considered to be the forerunners of the very slightly more advanced *pei* characteristic of Miao-ti-kou II.

The main advocate of the proposal to derive the Lung-shan from the painted ware tradition originally was Chang Kwang-chih, and it is he who dealt more

comprehensively and more intelligently with the developmental theory than has any other scholar. His position on this matter as stated in 1968 is worth quoting in full:

I have argued that the Lungshanoid cultures throughout North China constituted a horizon for all of North China that must be placed stratigraphically above the whole scope of the Yang-shao culture, and that the differences between the two cultures were developmental. . . .

This developmental sequence constitutes the backbone the prehistoric portions of this volume. To be sure, this view is merely a working hypothesis based upon a subjective interpretation of the data . . . [It] in essence agrees with . . . the new interpretation given the data by several field archaeologists in China [An Chih-min, Shih Hsing-pang, Hsü Shun-ch'en].

"Particularly as a result of the discovery of the Miao-ti-kou II culture, the hypothesis has been generally accepted by archaeologists that the Lung-shan cultures of the Chung-yüan were developed out of the Yang-shao culture." . . .

Either these cultures formed a separate cultural system (in contrast with the Chung-yüan Yang-shao culture), and originated in southeastern China (Huaiho or Yangtze-Hanshui area), moved northeastward to establish contact with the Yang-shao culture, and gave rise to the Lung-shan cultures of eastern North China; or the Lungshanoid cultures were derived from the Yang-shao culture of the Nuclear Area, representing its expansion onto the eastern and southeastern areas of China, and were ancestral to the various local Lung-shan cultures. Available archaeological evidence does not yet confirm either of the alternatives. We must know more about the chronology of each of the Lungshanoid cultures and their relations with each other before a final position can be taken. . . .

Insofar as the present evidence is concerned, it leans heavily toward the second of the above alternatives.²⁾

Still, of the two alternatives posited here, the first, and not the second, has long seemed to the present writer preferable. One of Chang's main reasons for assuming that the Lung-shan derives from the Yang-shao and subsequently moved into southeast China was "the pressure of a growing population and population density in the Chung-yüan . . . and the settlers' capability of engaging in an agricultural way of life outside the Nuclear Area."³⁾ The argument was somewhat tenuous, in so far as we had no evidence that the population density on the Chung-yüan at the time in question was in any way sufficient to induce massive migrations out of the area.

Moreover, of the four criteria Chang considered as decisive for proving Lung-shan to be a development out of Yang-shao, two, when analysed carefully, did not preclude the possibility that Lung-shan was an intrusive element, assimilated gradually by the Chung-yüan culture: (1) "The Lungshan-like cultures must be shown to be homogeneous throughout the Chung-yüan or even China; they must exhibit cultural identity with the Yang-shao, on the one hand, and developmental contrast, on the other." (2) "Both in general cultural form and in specific artifact types the steps of change must be traceable from the Yang-shao to the Lung-shan-like cultures."⁴⁾

Chang's other two criteria are more to the point: (3) "They [the Lung-shan] must be proven later in time than the Yang-shao culture as a whole, although not necessarily to have preceded the Shang civilization everywhere in China, for the sphere of distribution of the Shang was much smaller than the Lungshan-like cultures," and (4) "Regional chronologies of the Lung-shan-like cultures must be established to show that those cultures within the sphere of the Yang-shao distribution were earlier in time than (ancestral to) those outside it.") It was my own inability to substantiate precisely these two criteria that led me to doubt the developmental theory.

There is no question whatever that in the Chung-yüan, Lung-shan postdated the Yang-shao. But this does not of necessity presuppose that the one developed out of the other; in fact there was considerable evidence that ran strongly counter to this hypothesis. It may be true that the Lung-shan cultures in the Chung-yüan exhibit a certain degree of uniformity—the same types of unpainted, footed vessels occur throughout—but these very vessels signify an absolute distinction between the Lung-shan ware and the Miao-ti-kou painted ware traditions. As a result, their occurrence suggests, rather, the intrusive influence of a totally different, unrelated culture. It would appear that the Lung-shan did not grow out of Yang-shao and move southwards; on the contrary it was long established in the south, southeast and east and came into contact with the Chung-yüan during the mature phase of the Miao-ti-kou I tradition. The exchange of artifacts that must have marked the initial phases of this contact are perhaps represented by the *pei* at Miao-ti-kou I and certainly by the isolated examples of Miao-ti-kou painted ware found in the sites of the south and southeast. Subsequent contact between the two areas is signaled by the unpainted *tou* and *ting* at Ta-ho-ts'un, and finally by the more or less wholesale adoption, constitutive for the Honan Lung-shan, of unpainted, footed vessels.

Such an hypothesis is substantiated by several factors. The painted ware of the Miao-ti-kou tradition found in widely scattered sites across the south and southeast always occurs as an intrusive, that is to say, isolated, element within the context of a highly developed 'Lung-shan' culture. If the theory is maintained that these same southern cultures were themselves immediately derived from the Chung-yüan Lung-shan, it would seem extremely odd for the Miao-ti-kou painted ware to have recurred in these mature Lung-shan levels of southern sites, after it presumably had been abandoned by the Chung-yüan Lung-shan. Beyond that, there are numerous instances of painted sherds appearing in a southern or southeastern 'Lung-shan' stratum that overlies yet another 'Lung-shan' stratum from which the Chung-yüan painted ware is conspicuously absent.")

Moreover, although the evolutionary theory adhered to by Chang and the Chinese archaeologists has come to prevail, it should not be overlooked that certain other scholars, notably Li Chi and William Watson, have put severe

question to this theory, with the result that, in the end, they would apparently favor, in some form, a revival of the Two Culture Theory.

Li Chi, differing from Chang, perceives vast differences between Miao-ti-kou I and Miao-ti-kou II, the supposed 'transitional phase.' His basic argumentation is summarized in three statements:

(1) The ceramics of these two cultures (Miao-ti-kou I and II) show fundamental differences both in the method of firing and the general shapes.

(2) Among the remains of bone, stone, shell etc., [one] is struck by one remarkable feature in Miao-ti-kou II remains, namely, the arrowhead shows a greater variety of shapes and a more refined technique; Miao-ti-kou II remains indicated a more active hunting life also by a greater amount of remains of . . . wild animals. Remains of wild animals are altogether absent in the earlier stratum. In other words, the people of Miao-ti-kou I culture seem to be much more sedentary than the Miao-ti-kou II folks, who were still dependent upon hunting as an important source of their food supply.

(3) It cannot be definitely determined how early the cultural remains of Miao-ti-kou II can be dated except that it is later than Miao-ti-kou I. On the other hand, the Black Pottery Culture found in the eastern part of Honan, may definitely be assigned to pre-Shang . . . So the possibility of the origin of Miao-ti-kou II Culture from eastern sources could not be entirely excluded; at least this is true of some of the important cultural elements, especially the practice of scapulimancy which was not traced at Miao-ti-kou II but was discovered in sites as far as Kansu.'

Li Chi seems to assert, not only that there are significant discontinuities between Miao-ti-kou I and II, but that the chronological position of Miao-ti-kou II vis-à-vis other Chung-yüan Lung-shan sites is not unassailable. In that case Miao-ti-kou II might be considered to postdate other Lung-shan sites, and this factor would, of course, obviate its role as the 'transitional phase.' Although he was unable to offer much evidence to support his third point, which at the time of his writing was both the most debatable and the most provocative, Li Chi concluded that "pending further evidence and more precise dating, the early phase of Black Pottery Culture could hardly be attributed singly and directly to Yang Shao inspiration; its origin is an integration of several diversified elements, some of which show an independence of character quite foreign to the cradle land of the Painted Pottery Culture."*)

William Watson, following the same line of reasoning, has also argued that the contrast between the Yang-shao and Lung-shan cultures is too great to be accommodated by the developmental theory. Like Li Chi, he was troubled by that aspect of the developmental theory which presupposes Miao-ti-kou II as the 'transitional phase':

The excavators argue that habitation at Miao-ti-kou was not interrupted, so that we witness there the emergence of the Lungshan ceramic tradition from the Yangshao. Unfortunately it was not possible to demonstrate the relation of the transitional to the fully developed Lungshan stratigraphically, since deposits representing the latter were absent at Miao-ti-kou and present only at San-li-ch'iao across the river Ch'ing-lung-chien, where they overlay typical Yangshao without the intervention of a transitional stage . . .

On at least six extensive sites in the centre of this province [Honan], and at most of the sites in its northern part, typical Lung-shan is found resting directly on the local Yangshao, and the stratigraphy indicates a discontinuity, whereas a transitional phase, such as is now postulated, would be expected to leave its traces over some considerable area.⁹⁾

The substantial differences between Yang-shao and Lung-shan, as well as the uncertain relationship between the so-called 'transitional phase' of Miao-ti-kou and the typical Honan Lung-shan culture, led Watson to the opinion that:

The implications of the stratification of Lungshan over Yangshao in Honan for the dating of the eastern province of Lungshan as a whole are still uncertain. It seems improbable that the Lungshan settlements of the eastern part of the alluvial plain of the Yellow river, of Shantung and the other coastal provinces, should all prove to be later than the Yangshao of Honan . . .

These aspects of the Lungshan neolithic tell against the theory currently favoured in China of a single cultural impulse diffusing from a generative centre in south Shensi and west Honan . . . The facts of distribution of ceramic forms, tools and burial rites combine to give east China a unique character which cannot be satisfactorily explained by a simple diffusion from the centre, and by complete derivation from Yangshao tradition. The geographic distributions point either to north-south connections along the eastern seaboard, reaching at the extremities into Kiangsu and the Manchurian basin, shown by stone axes and knives, and the burials; or, like the pottery forms, support no marked cultural movement from west to east, but in many details suggest the contrary.¹⁰⁾

What neither Li Chi nor Watson could have foreseen at the time they voiced their uneasiness about the developmental theory was that the publication of certain carbon-14 dates would, in one swift blow, strike down the concept of Miao-ti-kou II as the 'transitional phase.' H 558 belonging to the Lung-shan stratum of Miao-ti-kou has been carbon-dated to (ZK 111) 2780 ± 145 B. C.¹¹⁾ ; F 20 at Ta-ho-ts'un, which contained a mixture of late Miao-ti-kou painted ware and unpainted Lung-shan ware has been dated to (BK 76004) 3070 ± 210 B. C.¹²⁾ Thus, suddenly, it is Ta-ho-ts'un that assumes the role of the sought-for 'transition site,' and there, as we shall explain, the Lung-shan forms for the most part appear to be intrusive.

In his search for an alternative origin of the Lung-shan culture in the east, Watson settled upon the northeast: "The economic tradition of the eastern seaboard and the adjacent areas inland, already ancient, combined with cultural affinities and possibly ethnic affinities which lead far to the north-east. The quasi-settled tribes of fishermen in territories extending to the mouth of the Amur and beyond, pressing southwards towards the east China coast, must explain the idiosyncrasies of Lungshan civilization."¹³⁾ The primary evidence for this hypothesis is summed up in the formulation that "the spiritual ties of the eastern Chinese population with the far north are symbolized by the arm-ring and chisels of nephrite which are found in the Lungshan culture, for these objects, or the material from which they are made, were imported from Baikalia, and surely by no other route than the Amur and Sungari valleys."¹⁴⁾

My own investigation of the relationship of the Yang-shao and Lung-shan cultures has long since led me to question the likelihood that Lung-shan can be explained simply as a development from Yang-shao. It seems now more fitting to conclude that Yang-shao and Lung-shan are in origin two separate traditions, the one located in central China, the other distributed over a large area in southern and eastern China. In submitting that the south harbors the origins of Lung-shan, I obviously differ from Watson who tended to see it stemming from the northeast. Although it is perfectly reasonable that the Lung-shan cultures may have had intermittent communication with the northeast, that area cannot be seen to offer a source for the Lung-shan pottery style.¹⁵⁾

Finally, I detected a shadow of support for my own version of the matter in the remarkable statement made by Wu Shan-ching in 1973 in his study of the chronological development of the southeast coast cultures: "We used to consider that the neolithic culture of the Chiang-Huai region generally had to be very much later, or backward, in relation to the Chung-yüan territory. Nowadays we have come to see that, at least in the period corresponding to the Miao-ti-kou type of the Chung-yüan Yang-shao culture, our forefathers were already engaged in productive labour in this area, [so that] just like the Huang-ho drainage area, this region is equally the cradle that nurtured the ancient civilization of China."¹⁶⁾ Wu stops short of proposing a southern origin for the Lung-shan culture, but his statement implies a backing away from, or at least a qualification of the Nuclear Theory; and he points to the south.

2 The Kiangsu Sites

Addressing Kiangsu with a view to the extension of the Miao-ti-kou ware into that area, we find a situation not unlike the one we met in southern Honan and Hupei; only that in Kiangsu, those who greeted the newcomers from the Chung-yüan—or those who brought home the Miao-ti-kou vessels and the formula for producing their designs—were themselves possessed of a culture decidedly more raffiné and alluring than that in evidence elsewhere in the south.

The first Kiangsu site that comes to our attention is Liu-lin, located about thirty kilometers northwest of P'i-hsien, almost on the Shantung border. A hundred meters to the west of the site runs the small T'ao-kou-ho, which originates in Ts'ang-shan-hsien in Shantung.¹⁷⁾ The first neolithic finds at Liu-lin were made in 1958; subsequently there have been two extensive excavations, one in 1960, and another in 1964. We shall deal with each site report in turn.

In 1960, 2000 square meters, out of the site estimated to comprise a total of 24000 square meters, were opened up.¹⁸⁾ The most important discoveries were fifty-two graves, most of them lying within fifteen trenches dug along the east side of a stream that runs through the site on a north-south axis. According to the report, the graves were disturbed; but nevertheless it was still possible to discern

that originally they belonged to two different strata.¹⁹⁾ The authors suggest that the upper, or later, Liu-lin phase is most closely related to the nearby Kiangsu site of Hua-t'ing and to the Shantung site near Ta-wen-k'ou; the finds from the lower level are believed to resemble those of the Ch'ing-lien-kang culture as exemplified by the eponymic site in the Huai-an area of Anhwei.²⁰⁾

The pottery unearthed during the first excavation is described in detail, but only a few pieces are illustrated. Notwithstanding, it is clear that the finds from M 56²¹⁾, a late tomb on the west side of the stream, are to be associated with those from Ta-wen-k'ou²²⁾ and Hua-t'ing;²³⁾ the *pei* is angular in outline and displays a tall openwork foot; the shape of the *hu* and *ting* are also characteristic of the above-mentioned sites. By contrast, the vessels from the lower level are softer and rounder in profile, more in keeping with what we know of Ch'ing-lien-kang, as are the few sherds painted with a simple sort of cross-hatching.²⁴⁾

Moreover, apart from the pottery, the first season of excavations at Liu-lin revealed several significant features of this Kiangsu culture: (1) Evidence of an advanced jade craft was afforded by skilfully worked beads, small disks and knives, all of which are perforated. (2) One meets at Liu-lin for the first time with the curious burial custom of placing dogs at the feet of some of the dead. (3) Systematically drilled tortoise shells were found in certain graves. Particularly the dog burials and the apparently ritualistic use of tortoise shells are surprising anticipations of Shang customs.

During the 1964 excavation,²⁵⁾ nineteen additional trenches were opened. The new squares exhibited three separate strata: (1) the top level consisting of humus, 0.6–0.2 meters deep, in which a mixture of modern, Han and neolithic sherds was found; (2) a level of soft yellowish-grey earth, 0.2–1.3 meters deep, containing a small amount of red baked earth, a few Han artifacts, neolithic sherds and stone implements; in addition a Han grave was found to have penetrated into this level; (3) a layer of greyish brown earth, 0.2–1.95 meters thick; in this level were discovered no less than 145 neolithic burials.²⁶⁾ These graves were segregated into five clusters.²⁷⁾

1 T 403–405	comprising	24 graves
2 T 406–408	comprising	24 graves
3 T 412–413	comprising	28 graves
4 T 707, 708, 806, 807	comprising	21 graves
5 T 805, 905	comprising	47 graves

The authors proposed that the graves represent a common clan cemetery, while each of the five groups of graves belong to a single, or several closely related families within the clan.²⁸⁾ The contents of each cluster of graves, however, are sufficiently diverse to dissuade us from any notion that they might form convenient chronologically discrete units; on the other hand the stratigraphic

level of the graves themselves is differentiated into three additional substrata, and the graves are chronologically distinguishable in a ready manner according to whether they are positioned in the upper, middle or lower levels. The artifacts they contain have been roughly categorized as belonging to an 'early' or to a 'late' period.²⁹⁾

Although a few painted sherds were scattered throughout the various squares, only those deriving from the graves were found within a meaningful stratigraphic context. Two of the four painted vessels from the graves are classified as Miao-ti-kou types; the painted bowl from M 72 is illustrated (Figure 191) and leaves no doubt that it is in the Miao-ti-kou style; and the same, presumably, is true for the other painted bowl from M 102. Without exception, the painted ware was found only in the most opulent burials, distinguished by the large number of their grave goods, all of exceptionally high quality. We may assume that such painted vessels were rare and treasured items, restricted to the graves of select members of an elite.

"Among the four painted pottery vessels unearthed from the tombs," the authors of the site report observe, "two *po*-vases are somewhat similar to those of the Miao-ti-kou type of the Yang-shao Culture. What distinguishes them from the typical Yang-shao painted pottery is the softer paste and easily peeling-off decoration. They were probably products of local kilns under the influence of the Yang-shao Culture from the Central Plain."³⁰⁾ The entirely coherent, but rather regimented pattern on the *po* from M 72 and the introduction of red pigment support the hypothesis of local manufacture.

The stratigraphic position of the graves containing the two Chung-yüan style *po* is obviously crucial. M 72 is located in the upper of the three levels; M 102 is recorded as being in the second level, but is situated precisely 0.2 meters lower than M 72.³¹⁾ It is noteworthy that neither of these graves was found in the lowest, or earliest, level. On the basis of their contents, M 72 was classified as belonging to the 'late' phase of Liu-lin; M 102, on the other hand, was classified as 'early'. It should be pointed out, however, that M 102 does not contain vessels of the most primitive Liu-lin type, although they are clearly somewhat earlier than those of M 72.

The classification of these two tombs as 'early' and 'late,' as well as the relationship of the painted ware to the rest of the pottery of Liu-lin can be clarified through the characterization, given in the report, of the two stages represented by the excavated finds from this site.³²⁾ The authors believe, with good reasons, that the pottery remains unearthed during this second season at Liu-lin mark two distinct stages of a continuously evolving culture. These stages are represented by the major types of vessels found, respectively, in the lower and upper levels, which it may be helpful to examine in some detail.

The most startling of all Liu-lin vessels and the unquestionable masterpieces of their potters are the *pei*, or drinking vessels. The *pei* may be separated into

essentially five distinct types (Figure 192): (1) the simple flat-bottomed *pei* with flaring mouth; (2) a taller version resting on three small feet; (3) the trumpet-mouth *pei* with tall cylindrical stem and small feet; (4) a more impressive type, flaring more strongly to the mouth and characterized by its slender, horizontally grooved stem and higher feet; and (5) the tallest version, with a broad mouth and with a long stem girth at the center by a thicker band of clay. Of these, types I–III are considered ‘early’ and IV–V are classified as ‘late.’

Another vessel, the *tou* (Figure 193) is classified into three types: the earliest is rounded in form, whereas the two types linked to the late period exhibit a more sharply delineated silhouette, with the more advanced example showing a perforated foot. The *ting* are divided into two groups, the *p'en-ting* and the *kuan-ting*, depending on the depth of the bowl. The earlier *p'en-ting* (Figure 194) have softly rounded bowls and rounded feet; those of the later phase are approximately triangular in profile, and their legs, of more nearly triangular section, are bevelled along their outer edges. The early *kuan-ting* (Figure 195) are characterized primarily by their tall, rounded legs that jut out from the bowl in cabriole fashion. The legs of the later *kuan-ting* are less widely spaced, and they are either bevelled toward the bottom or shaped as thin wedges set in radial order and serrated at the edges.

At Liu-lin, then, one may witness the evolution of several basic vessel types spanning a considerable period of time, during which the forms become ever more clearly articulated and the formal attributes of each type of vessel are variously explored. The *pei* stems grow ever taller; the *tou* feet are structured by perforations; *ting* feet are serrated. In general, the vessels grow increasingly ornate, and the alterations in form would appear to be of primarily aesthetic rather than functional significance. Such is the case particularly with the *pei*—a vessel restricted no doubt to ceremonial drinking—which, growing ever more elegant, comes to be precariously unsure on its feet and also inconvenient to handle.³³⁾

Added to certain of the graves containing these sophisticated unpainted vessels are the gaudier—and livelier—Miao-ti-kou style *po*, together forming a decidedly unhomogeneous, but nonetheless impressive, array; the owners were, so to speak, the fortunate recipients of the best of two worlds. Of the graves at Liu-lin that held Miao-ti-kou type painted pottery, the ‘late’ M 72 yielded four *kuan-ting* of the late Liu-lin type, four late *p'en-ting* and an advanced Stage IV tripod *pei*. M 102, on the other hand, displays an early stage *kuan-ting* but also a mature Stage II *pei*.³⁴⁾ Since it is established that the Miao-ti-kou style painted ware in neither instance is associated with any rudimentary form of the Liu-lin culture, and since no graves in the lowest stratum were found to contain any painted ware, we have at Liu-lin no evidence of a painted pottery culture inspired by the Chung-yüan gradually giving way, or evolving into a Lung-shan culture. Rather, the Miao-ti-kou ware occurs in every instance within an advanced Lung-

shan assemblage characterized by the *ting*, *tou* and *pei*; the Miao-ti-kou vessels are as manifestly intrusive here, as they were in Hupei.

Were the Liu-lin culture to be explained as an extension of the Chung-yüan Yang-shao, one would expect to find a significant number of other characteristic Yang-shao forms retained at Liu-lin, among them perhaps the pointed bottom *p'ing*, yet such forms are entirely lacking from the lower as well as the upper level of that site. If, alternatively, Liu-lin were conceived as an extension of the northern Lung-shan, one should expect a closer correspondence of the *ting* and *tou* with those found in Honan; also in that case the presence of Miao-ti-kou vessels would, of course, create considerable difficulty, as that style evidently had vanished in Honan before the Lung-shan culture came into prominence. More in keeping with the presently available evidence concerning the site of Liu-lin would be the hypothesis that the Miao-ti-kou vessels are local copies of Chung-yüan pottery, an alien style reproduced by the Kiangsu artists with exceeding carefulness, but not further developed in any significant way.

An investigation of the second P'i-hsien site, that of Ta-tun-tzu, lends added weight to this interpretation. Ta-tun-tzu is located forty kilometers to the north of P'i-hsien, 3.5 kilometers north of Ssu-hu-chen and 3 kilometers south of the Shantung, Ts'ang-shan-hsien town of Hsiao-hu-tzu.³⁵⁾ The site has been known since 1962 and was excavated during November and December of 1963. The cultural deposits are located on an elevated oval plateau approximately 250 meters in diameter; within this area five trenches were opened. In T 1, 3, 5, and 7, the stratigraphy was generally the same: level 1, humus; level 2, hard and red earth broken into by modern graves; level 3, mixed layers primarily of grey earth.³⁶⁾ In the ashpit H 2, contained in T 7, two strata were discerned, the lower of which yielded 451 sherds, deer-tooth hooks and tortoise shells.³⁷⁾ The finds from the third level are considered to belong to the Liu-lin culture, while those from the ashpits underneath are typical of the Ch'ing-lien-kang culture.³⁸⁾

Most revealing at Ta-tun-tzu was the discovery of 42 neolithic graves, all situated in the upper level. This upper stratum, however, is itself divided into five sub-levels and the graves within the four trenches are categorized according to the sub-level in which they are located:³⁹⁾

	T 1	T 3	T 5	T 7
level 1	M 1, 42	M 16, 36	M 38-40	M 5
2	M 2-4, 20	M 17, 18, 25	M 41	M 9, 12
3	M 6-8, 19, 33	M 30, 31, 44	M 30	M 10, 11, 14, 15, 43
4	M 21-23	M 26-29, 32		
5	M 34-35, 37			

Since the tombs are distributed in so many stratigraphical levels, it would seem tempting to regard them as representing five different chronological phases, as happened with the graves at Liu-lin. It soon becomes evident, though, that

such an attempt is entirely futile, for the graves in any one level yield quite disparate finds. The graves can, however, be separated into two groups on the basis of their contents: those which the authors of the site report claim exhibit a closer resemblance to the finds from Liu-lin, and those they would link to Hua-t'ing. The distribution of these two types of graves within the four trenches is significant (as it was not at Liu-lin): of the fifteen 'Hua-t'ing'-type graves, no less than twelve are located in T 5 and T 7; in neither of these two trenches were there graves of the 'Liu-lin'-type. Of the other three 'Hua-t'ing' graves, two, M 36, located in T 3, and M 42, located in T 1, are separate from the 'Liu-lin' graves in these trenches.⁴⁰ M 16 in T 3, however, the third 'Hua-t'ing' grave overlies the 'Liu-lin' grave M 30; on the basis of this overlap, the 'Hua-t'ing' graves are considered to be later than those of the Liu-lin type.⁴¹)

The vessels from the Liu-lin stage graves belong to a fair number of types, the *pei*, *tou*, *kuan-ting*, *p'en-ting* etc. Unfortunately, at the time the Ta-tun-tzu report was prepared, the second report on the Liu-lin site, which showed the Liu-lin culture to comprise two consecutive stages (apart from the lowest Ch'ing-lien-kang level), had not yet been published; as a result, the Ta-tun-tzu report makes no distinction between the relative earliness or lateness of the Liu-lin type finds of Ta-tun-tzu itself. Now it seems certain that these materials belong exclusively to the late Liu-lin phase. The slender, tall-stem *pei* (Figure 202, left), found for instance in M 30 and M 33, are identical to the late Stage III *pei* from Liu-lin; that from M 44 is most closely matched by late Stage V; the *tou* have sharply delineated profiles and perforated stems which are features exclusively of the late Liu-lin period.

The 'Hua-t'ing' vessels (Figure 205), on the other hand, have an individuality all their own. Nevertheless, the classes of vessels represented are entirely familiar, and are closely affiliated with those of the later Liu-lin phase, whose more advanced descendants they surely are. The 'Hua-t'ing' vessels display the same clearly articulated profiles, yet they are altogether more massive in appearance. The *p'en-ting* have deeper bowls than before, while the legs, thin, wedge-shaped and radially arranged, are now indented at the top so that they jut out slightly before tapering downward to nearly pointed tips. Some legs are notched along their outer edges, while others are embellished in openwork by triangular perforations. The *tou* normally resemble the late Liu-lin type with perforated foot; the unusually high foot of one yet more ornate example presents a complex structure of large circular perforations set between pairs of smaller triangles (Figure 203). The single example of the Hua-t'ing tripod *pei* resembles closely that of Liu-lin late Phase V. But more revealing of the Hua-t'ing style is a new type of *pei* (Figure 205 upper right, Figure 204) with a sturdier bell-shaped foot, which recalls the older type in the shape of its bowl and the hollow stem, which here is girt by thick protruding bands of triangular cross-section. As a whole the vessels seem less graceful, also less fanciful; but at the same time, they

are more practical and more imposing in character. Two vessel types equally typical of the style of Hua-t'ing are: the massive round-bodied *kuan*, and the *hu* water vessel with prominent handles;⁴²) the latter is especially notable for its one flattened side, which makes it easier to fill.

Of the ten pieces of painted pottery found at Ta-tun-tzu, eight were recovered from the 'Liu-lin' graves and two from the 'Hua-t'ing' graves. From M 30, a rich grave containing twelve objects, came two painted ware bowls, both in the Miao-ti-kou style, but, like those from the Liu-lin site, differing from the Chung-yüan examples primarily in the use of a white slipped ground and the application of red, as well as black, paint. The fragment of one (Figure 197) exhibits the complex reserve spiral comparable to that from M 72 at the Liu-lin site. The design, executed according to a formula like that used at Miao-ti-kou, assuredly was similar to that seen on a complete *po* from the P'i-hsien area (no site is mentioned) exhibited in the Chinese Exhibition of 1973-1975 (Figure 196).

The technically less demanding secondary 'floral' pattern of Miao-ti-kou, constructed on the basis of subdividing the surface with segmental triangles, was used on the second painted vessel from M 30 (Figure 200); a P'i-hsien vessel with similar patterns was also featured in the Chinese Exhibition (Figure 199). The *p'en* from M 33 (Figure 198), in turn, presents a variation on the 'floral' pattern, incorporating the oval divided by segmental triangles. Apart from a tripod *pei* of a more developed type than that found in M 33, M 44 contained a bowl with star-like motifs in white on a pink ground (Figure 201). The coloring and the motif would make this bowl appear as a purely local invention, were it not for a similar vessel excavated recently at Tung-chuang-ts'un, Jui-ch'eng, in Shansi.⁴³) The comparatively simple design painted on the surface of a *ting* from M 22,⁴⁴) however, is a local variant.

The two examples of painted ware found in the Hua-t'ing phase M 38 are not illustrated, but they are said, in the site report, to resemble sherds from the Honan site of Ch'in-wang-chai.⁴⁵) These sherds are described as decorated with parallel curving lines. If the authors' analysis of the two pieces is correct, as we are left to assume it is, then we may relate the 'Liu-lin' graves chronologically to the Miao-ti-kou period, and the 'Hua-t'ing' graves to the slightly later Miao-ti-kou/Yang-shao-ts'un phase.

Let us then summarize the results of the two excavations at Liu-lin and that at Ta-tun-tzu. From the first Liu-lin report it may be concluded that the Liu-lin finds postdate those of the Ch'ing-lien-kang culture. The second report enables us to divide the style of Liu-lin into two chronologically successive phases. The Ta-tun-tzu excavation revealed a lower stratum of Ch'ing-lien-kang material, above which lay Liu-lin phase graves, which in turn were overlaid by those of the Hua-t'ing period. The Liu-lin phases, because of the painted pottery coming from the

corresponding graves, may be equated with the Miao-ti-kou period in the Chung-yüan, while the 'Hua-t'ing' period is probably equivalent to the Miao-ti-kou/Yang-shao-ts'un phase. Thus we arrive at the following chronological sequence:

KIANGSU

CHUNG-YÜAN

Pan-p'o

(ZK 38) 4770±135 B.C.—(ZK 127) 4290±200 B.C.

Ch'ing-lien-kang

(ZK 90) 4494±200 B.C.

Liu-lin I

Miao-ti-kou I

(ZK 110) 3910±125 B.C.

Liu-lin II

Hua-t'ing

Miao-ti-kou/Yang-shao-ts'un phase at Ta-ho-ts'un

(ZK 185) 3685±125 B.C.—(BK 76004) 3070±210 B.C.

The authors of the Ta-tun-tzu report, on the other hand, proposed the following parallels between the cultures of Kiangsu and those of the Chung-yüan: "In terms of relative age, the remains of the Ch'ing-lien-kang type in this region are probably contemporaneous with the Yang-shao culture of the Central Plains while those of the Liu-lin type are slightly later than the Yang-shao culture. As the remains of the Hua-t'ing type are slightly later than those of the Liu-lin type, they are probably contemporaneous with the early stage of the Lung-shan culture in the Central Plains."⁴⁶)

This hypothesis is in need of modification. First of all, the Chinese archaeologists have obtained a carbon-14 date for the lowest or Ch'ing-lien-kang level at Ta-tun-tzu. The high age indicated by this date—(ZK 90) 4490±200 B. C. ⁴⁷)—may at first have startled some scholars; for the Ch'ing-lien-kang level accordingly must be considered as roughly contemporary with Pan-p'o. Since what we know of Pan-p'o could not possibly account fully for the Ch'ing-lien-kang culture, we must then conclude further that at this early time there were at least two independent pottery cultures flourishing in separate parts of China. The Liu-lin, and the subsequent Hua-t'ing stages of that Kiangsu culture, can be taken as contemporary with the expansion of the Miao-ti-kou painted pottery tradition beyond the Chung-yüan area; this much is proven by the intrusive presence of Miao-ti-kou style pottery in the Liu-lin graves and the Liu-lin age graves at Ta-tun-tzu. But the authors of the Ta-tun-tzu report were doubtless correct in their opinion that the Hua-t'ing phase is contemporary with the initiation of the Chung-yüan Lung-shan.

During the Miao-ti-kou period in the Chung-yüan—this is the ineluctable conclusion we are led to—there existed in the region of Kiangsu a highly developed branch of the Lung-shan culture, defined by its tradition of unpainted pottery, whose featured vessel types were the *ting*, *tou* and *pei*. This culture had at its disposal an advanced craft of jade working, and used tortoise shells for ritualistic purposes. The ornate and highly stylized *pei* suggests strongly customs of ritualistic or ceremonial drinking. We may well wonder what elements of the Kiangsu culture might have been of sufficient interest to the Miao-ti-kou people that they would have been transplanted, in some form, to the Chung-yüan area.

Notes to Chapter VII

¹⁾ Fu Ssu-nien, Li Chi et al., *Ch'eng-tzu-yai: A Report of Excavations of the Proto-historic Site at Ch'eng-tzu-yai, Li-ch'eng Hsien*, Shantung, *Archaeologia Sinica*, No. 1 (Nanking, 1934), pp. 1–2.

²⁾ Chang Kwang-chih, *Archaeology of Ancient China* (1968 edition), pp. 129, 130–131, 147. Chang has tacitly withdrawn all mention of the Nuclear Theory from his 1977 revised edition of this text. Nevertheless, he does not seem to have relinquished this concept entirely; and he still adheres to the idea of Miao-ti-kou II as a 'transitional phase': "The interrelationship of the Yang-shao and Lung-shan cultures in the Chung Yüan remains as it was viewed in the 1960s—namely, that the Lung-shan culture in the Chung Yüan developed out of the Yang-shao culture through an intermediate transitional stage of the Miao-ti-kou II culture." (*Archaeology*, 1977 edition, p. 154).

³⁾ *Ibid.*, (1968 edition) p. 147.

⁴⁾ *Ibid.*, p. 131.

⁵⁾ *Ibid.*, pp. 131–132.

⁶⁾ Concerning the Chinese neolithic specifically, Solheim put forth two astonishing hypotheses: (1) "The traditional reconstruction of Southeast Asian prehistory has had migration from the north bringing important developments in technology to Southeast Asia. I suggest instead that the first neolithic . . . culture of North China, known as the Yangshao, developed out of a Hoabinhian subculture that moved north from northern Southeast Asia about the sixth or seventh millenium B. C." (2) "I suggest that the later, so-called Lung-shan culture, which supposedly grew from the Yangshao in North China and then exploded to the east and southeast, instead developed in South China and moved northward. Both of these cultures developed out of a Hoabinhian base." (*National Geographic*, 139, no. 3, March 1971, 339).

⁷⁾ Li Chi, *Bulletin of the Department of Archaeology and Anthropology National Taiwan University*, 21–22 (November 1963), 11–12.

⁸⁾ *Ibid.*, p. 12.

⁹⁾ William Watson, *Cultural Frontiers in Ancient East Asia* (Edinburgh, 1971), pp. 33–35.

¹⁰⁾ *Ibid.*, pp. 17, 35–36.

¹¹⁾ Hsia Nai, *KK* (1977/4), 229.

¹²⁾ *Ibid.*; *KKHP* (1979/3), 323, fig. 17; pl. 3:1–3, 6; pl. 4:3, 4, 6; pl. 5:1, 2, 5, 6; pl. 6:1–5. The much higher date of 3685 ± 125 B. C. (ZK 185) for F 2 at the same site is somewhat disturbing (*KK*, 1977/4, 229). Although F 2 contained little by way of pottery, this structure adjoins F 1 which, judged by the plentiful array of pottery found within it, must be very closely contemporary with F 20 (compare *KK*, 1973/6, 330–336, pls. 1–3). The authors of the 1979 report classify the remains from F 1, F 2 and F 20 as belonging together within the third of the six phases they recognize at Ta-ho-ts'un (*KKHP*, 1979/3, 317), although in another instance F 2 is mentioned under phase two (*ibid.*, p. 311). An additional confusion is to be noted in the list of radio-carbon dates (*KK*, 1977/4, 229, no. 18) where the sample BK 76004 is designated as coming from T 15 F 2. F 2 (ZK 185, *ibid.*, no. 15) is located in T 4; BK 76004 apparently refers to a specimen taken from F 20 (not F 2) which is located in T 15 (see *KKHP*, 1979/3, 302, fig. 3 and p. 317). Nevertheless there is no question but that the early finds from Ta-ho-ts'un antedate those from Miao-ti-kou II.

¹³⁾ Watson, *Cultural Frontiers in Ancient East Asia*, p. 36.

¹⁴⁾ *Ibid.*, pp. 36–37.

¹⁵⁾ At one time Yen Yin suggested that analyses of skeletal remains from eastcoast sites demonstrated that the people who inhabited these sites were not of northern stock, but, to the contrary, exhibited strong affinities to the Polynesian type (*KKHP*, 1972/1, 91–122). He also remarked that the Ta-wen-k'ou people had the custom of artificially altering the proportions of the skull and knocking out teeth in symmetrical fashion, customs said to be common practice in the Polynesian complex, such as the Hawaiian and Guam Island group (*ibid.*, pp. 104–105). Yen Yin's theory has been recently refuted by Han K'ang-hsin and P'an Ch'i-feng (*KKHP*, 1980/3, 387–402).

¹⁶⁾ Wu Shan-ching, *WW* (1973/6), 57. In none of the more recent articles treating extensively the periodization of the eastern seaboard cultures does there emerge a clear statement that the Lung-shan tradition originated in the south independent of influence from the Chung-yüan (e. g. *WW*, 1978/4, 46–66, reprinted in *Wen-wu chi-k'an*, no. 1, 1980, pp. 7–18; Hsia Nai, *KK*, 1977/4, 217–232, translated into English by Nancy Price, *Early China*, no. 3, Fall 1977, 87–93).

¹⁷⁾ Yin Huan-chang and Chang Cheng-hsiang, *KKHP* (1962/1), 81.

¹⁸⁾ *Ibid.*, p. 82.

¹⁹⁾ *Ibid.*, p. 83.

²⁰⁾ *Ibid.*, p. 98.

²¹⁾ *Ibid.*, p. 92, fig. 10:2–3, 6, 8.

²²⁾ Yang Tzu-fan, *WW* (1959/10), 61–64; *WW* (1960/2), cover and pls. 1–17.

²³⁾ Sung Po-yin, *WW* (1956/7), 23–26, 13, pls. 1–7.

²⁴⁾ Chao Ch'ing-fang, *KKHP*, 9 (1955), 13–23, pls. 1–12.

²⁵⁾ Yin Huan-chang, Yüan Ying and Chi Chung-ch'ing, *KKHP* (1965/2), 9–47, pls. 1–14.

²⁶⁾ *Ibid.*, pp. 9–11.

²⁷⁾ *Ibid.*, p. 12.

²⁸⁾ *Ibid.*

²⁹⁾ *Ibid.*, charts following p. 47.

³⁰⁾ *Ibid.*, p. 47.

³¹⁾ Yin Huan-chang et al., *KKHP* (1965/2), chart p. 14, line 5.

³²⁾ *Ibid.*, pp. 32–43.

³³⁾ For the development of the ceramic forms at Liu-lin also see Kao Kuang-jen, *KKHP* (1978/4), 402, fig. 1 (reprinted *Wen-wu chi-k'an*, no. 1, 1980, 49, figure 1).

³⁴⁾ *KKHP* (1965/2), chart following p. 47.

³⁵⁾ Yin Huan-chang et al., *KKHP* (1964/2), 9.

³⁶⁾ *Ibid.*, p. 11.

³⁷⁾ *Ibid.*, p. 11–12.

³⁸⁾ *Ibid.*, pp. 15, 19.

³⁹⁾ *Ibid.*, p. 20.

⁴⁰⁾ *Ibid.*, pp. 20–22.

⁴¹⁾ *Ibid.*, p. 20.

⁴²⁾ *Ibid.*, pl. 15:1; pl. 14:5, respectively.

⁴³⁾ *KKHP* (1973/1), 16, fig. 15:14; pl. 3:18.

⁴⁴⁾ Yin Huan-chang et al., *KKHP* (1964/2), pl. 9:1. For additional illustrations of the Ta-tun-tzu painted ware vessels referred to above as well as specimens excavated from this site during the late 1960s and 1970s see *Kiangsu ts'ai-t'ao* (Peking, 1978), pls. 15–42, 44–66.

⁴⁵⁾ Yin Huan-chang et al., *KKHP* (1964/2), 49.

⁴⁶⁾ *Ibid.*, p. 61.

⁴⁷⁾ Hsia Nai, *KK* (1977/4), 230.

LUNG-SHAN

1 Shantung

The question must be posed as to the precise relationship between the Shantung Lung-shan and those more southerly, Kiangsu Lung-shan cultures that were discussed in the previous chapter. It can be established that the Shantung neolithic sites represent a continuum of the basic northern Kiangsu culture characterized by the use of the perforated flat axe, bracelets of jade or other hardstones, by the presence of tortoise shells which have been drilled and of implements fashioned of hafted deer teeth, as well as unpainted pottery vessels raised as a matter of custom from the ground on a circular foot or on three legs.¹⁾ An analysis of the Shantung pottery suggests that this branch of the Lung-shan tradition evolved directly out of the later phase of the Kiangsu culture and that it is, for the most part, subsequent in date: the Ch'ing-lien-kang culture does not appear to have extended into Shantung, and the Liu-lin phase is also scarcely in evidence.²⁾ On the other hand, the Hua-t'ing phase of northern Kiangsu, that is, the phase proven on stratigraphic grounds to succeed upon the Liu-lin phase in the same area, is represented, farther to the north, in central Shantung, by a number of sites.

At Yeh-tien, twelve kilometers south of Tsou-hsien, where trial excavations were made in 1965, as many as fifteen graves were discovered, but although many of the graves were found to lie above others, the brevity of the report does not allow a chronological interpretation of the stratigraphic relationships at the site.³⁾ For our purposes it is useful merely to learn that the more than forty objects from grave M 15 place Yeh-tien securely in the sphere of the Kiangsu Hua-t'ing culture: we find, again, the usual perforated axes and a jade bracelet; but beyond that, the pottery is nearly identical to that of the Hua-t'ing phase. The *tou* exhibits the tall conical stem fashioned into an openwork pattern of disks, each bordered by four triangular perforations (Figure 206a). The *pei* (Figure 208a) with bell-shaped foot, here perforated, displays two protruding bands, triangular in section, around the stem. Again typical of Hua-t'ing, the legs of the *ting* are wedge-shaped and sharply articulated;⁴⁾ and in addition we find the *p'en-ting* (Figure 207a), its shallow bowl precariously set on tall legs.

The repertory of vessels is repeated at Kang-shang-ts'un, T'eng-hsien, and in the lowest of the three strata at Ta-wen-k'ou at Ning-yang-hsien.⁵⁾ Trial excavations at Kang-shang revealed vessels belonging to the same Hua-t'ing phase: the *tou* with openwork foot (Figure 206b), the *ting* with wedge-shaped legs,⁶⁾ and the *p'en-ting* on tall legs (Figure 207b). The round-bottom *hu*, as well as the *hu* with annular handles and the variety with one flat side are also in evidence, as is the *kuei* pouring vessel supported by three solid feet (Figure 208c). Yet two new vessel forms, not known from Kiangsu, occur at Kang-shang: (1) a small *pei* with shallow cup and with a broad stem enlivened by rows of circular perforations, and (2) a shallow bowl, its rim pinched on one side to facilitate pouring (the vessel is probably a mortar).⁷⁾ These two particular forms—as well as the general range of ceramic forms—link Kang-shang with the later phases of Ta-wen-k'ou⁸⁾ and with Hsi-hsia-hou in Ch'ü-fu-hsien⁹⁾ to the north.

Especially worthy of our attention is the site of Hsi-hsia-hou, which is stratified into two distinct levels representing two successive stages in the evolution of this eastcoast culture. Added to the full assemblage of typical eastern cultural paraphernalia is a large array of ceramics that affords the further opportunity to follow the distinctive Hsi-hsia-hou vessels through two clear-cut stages of their development. The *hu* with one flattened side from the lower level closely resemble those from Kang-shang-ts'un;¹⁰⁾ in its later stages it has gained in height, its neck is longer and more firmly articulated; the annular handles have grown thinner and more delicately ring-like. The tripod *kuei* in the lower level are of two types (Figure 209); the one with solid feet and with the handle joined to the base of the neck remains almost identical to the examples from Kang-shang-ts'un and those from earlier periods at Ta-wen-k'ou, save for the longer pouring channel; a second type is characterized by *li* legs and an extended pouring channel with the handle attached midway up the neck. In the upper level at Hsi-hsia-hou the version with solid legs is rarely seen; moreover the *kuei* with hollow legs has been altered so that the vessel gains a rounder, more even body and shorter, less bulbous legs. The corners of the pouring channel are bent in over the mouth; and an appliqué band around the body of the vessel has become more or less a standard feature (Figure 210).¹¹⁾

But it is the *tou* and *pei* which have undergone the most dramatic transformations. The *tou* from the lower level (Figures 211, 212) have broad shallow bowls; the stems, whether short or tall, are almost straight-walled and flare only slightly at the foot. The stems are preforated with circles and slim triangles with one curved side—a looser and less coherent arrangement of the same elements that composed the openwork pattern of disks bordered by triangular perforations visible on the *tou* stems from Hua-t'ing, Yeh-tien, and Ta-wen-k'ou. The *tou* from the upper level (Figure 213) have changed radically; their bowls, although deeper than those in the lower level, are essentially the same, but here the similarity ends. No short, broad-stem *tou* appear, nor any with

particularly high stems. Instead a compromise is achieved; the stem is short but narrow, concave in profile, and it flares toward an entirely innovative step-like, moulded base. This new *tou* form is reassuringly stable by comparison to either of the previous types. Furthermore, on the stems the openwork decoration of circles and triangles, characteristic of examples of the lower level, has been replaced by simplified designs consisting merely of circles in vertical rows alternating with rows of rhombic perforations.

The various types of *pei* found in the lower level have been similarly amalgamated into one type and have been transformed much in the manner of the *tou*. In the upper level the bowl of the *pei* (Figure 214) becomes deeper, and its sides curve to create a concave silhouette. The stem is contracted and somewhat bowed, and the foot, like that on the *tou* of the same period, ends in a pronounced molded base. The stems are similarly perforated with circles and diamonds. With these alterations the *pei* is, as if magically, transformed into a veritable goblet.

The evolution of the vessel forms from the lower stratum to the upper stratum at Hsi-hsia-hou is entirely obvious. The pottery from the lower level corresponds to the Hua-t'ing phase known from northern Kiangsu and from the Shantung sites of Yeh-tien and Kang-shang, and to the early period at Ta-wen-k'ou, while none of the distinguishing stylistic features of the upper level appear in any of the aforementioned pottery complexes.¹²⁾

Apart from that, the pottery characteristic of the upper level at Hsi-hsia-hou forms a connection to another group of Shantung sites considerably farther to the east. At Tung-hai-yü in Jih-chao and at San-li-ho in Chiao-hsien, pottery assemblages typical of Hsi-hsia-hou II are found in the lowermost stratum of each of these sites, and it is now certain that a chronologically successive stage of the Shantung Lung-shan may be recognized in the upper levels at these sites and at others associated with them.¹³⁾ The reports of the excavations at Tung-hai-yü and San-li-ho were published in the late 1970's; yet even prior to the availability of stratigraphical evidence, it seemed fully apparent that the remains from this same general geographical area—where we meet for the first time with a high percentage of black wares turned on a fast wheel—represented phases in the evolution of the Lung-shan pottery subsequent to those at Hsi-hsia-hou.

To understand the significance of what has been discovered in eastern Shantung, we may for the sake of simplicity limit our attention to but several of the most revealing vessel forms. While the *pei* from the lowest level at Tung-hai-yü (Figure 216) are almost identical to those from Hsi-hsia-hou II (Figure 214), those from the two upper levels are more precise in their articulation and differ by their stems which often are broader, in some instances nearly equalling the circumference of the bowl; and they also differ by the increased emphasis upon the rim, which becomes ever wider and of egg-shell thinness (Figures 215, 217, 218).¹⁴⁾

A series of densely spaced, narrow circumferential grooves, a type of

ornamentation natural to the use of the fast wheel, customarily decorates the goblet, as well as the cylindrical mug with annular handle (Figure 219). Moreover, it is by the period of the upper levels at Tung-hai-yü that the tripod *kuei* appears to reach the penultimate stage in its development; it stands now straight and tall, its body and neck centered directly above the *li*-legs (Figure 220).

Still more advanced in style than those from Tung-hai-yü are vessels from yet other sites, including San-li-ho, and Yao-kuan-chuang in Wei-fang-hsien, and those from the late stage I of the recently published site at Ch'eng-tzu in Chuch'eng-hsien.¹³⁾ It is at these sites where we first encounter a new and striking *pei*, perhaps best designated as a beaker (Figures 221, 222), which is distinguished by its wide dished rim, its cylindrical bowl and broad mid-section. The mid-section is sometimes embellished by fine interwoven incised lines and miniaturized openwork patterns, and the short stem exhibits an extraordinarily well-shaped molded foot (Figure 222). A forerunner of this particular *pei* is to be seen at Tung-hai-yü (Figure 218). In addition we find an entirely new type of *pei* with a wide rim rising from a cylindrical stem ornamented by a series of deep concave grooves (Figure 223). Nor can one fail to mention the exquisitely fashioned vessel, also referred to as a *pei* (Figure 224), with dished rim, a deep tapered body, its outer shell in openwork, and a trimly molded foot. This drinking vessel along with the others of the same period are supreme among the black egg-shell wares.

To this phase also evidently belongs the invention of the classical *tou*, with a shallow, flat-bottomed bowl elevated by a tall and comparatively slender stem flaring toward the base (figure 225), as well as the *lei* with a tall tapering body, best exemplified by the masterful specimen from San-li-ho II (Figure 226 right). Both the *tou* and the *lei* are sparingly decorated by double horizontal incised lines and by pairs of raised ridges. Other characteristic forms of this period worthy of note include the *hsien*-steamer and a type of *ting* with curious, curved legs of V-shaped section, which are embellished by appliqué median flanges (Figures 227, 228).

If the wares just described may rightly designate the classical phase in the evolution of the Lung-shan tradition, it is to a still later stage that we must assign the vessels recovered from Liang-ch'eng-chen, Jih-chao-hsien and those from M 32 (classified as Late I) and the Late Stage II at Ch'eng-tzu.¹⁴⁾ These vessels are more heavily potted, and are generally more massive, substantial and monumental in appearance than any which have preceded them (Figures 229–235). The *tou*, whether tall or with a shorter and broader stem, is more evenly rounded in shape (Figure 229); and we also note that the *pei* has been altered so that its form now imitates that of the *tou*, although its bowl penetrates deep within the stem (Figure 230). The *pei* as a shape of independent character at this point comes to an end. The cylindrical mug, on the other hand, is seen to continue, and it is accompanied as well by a variety with curving profile that tapers to a base of narrow diameter (Figure 234). Instead of clusters of narrow incised lines, the surface decoration consists in the main of horizontal raised ridges, which are now

employed on a wider range of vessels, including the *kuei* and the upper section of the *hsien* (Figures 231–233). Small handles or lugs seem to be applied in ever greater numbers (compare Figure 235 and 226). And, finally, the refined egg-shell wares of the preceding period are no longer much in evidence.

Moreover, during the 1958 excavation at Liang-ch'eng-chen something entirely unprecedented was found: a series of black ware sherds bearing an incised decoration of interlocking hook-like curved lines and others of more or less concentric configuration (Figure 237). The patterns on these sherds show a marked similarity to those incised on either side of the butt end of a long jade chisel of excellent workmanship discovered at Liang-ch'eng-chen in 1963 (Figure 236).¹⁷⁾ The designs on the chisel, which are complete, are recognizable as stylized faces with peculiar spiral-like eyes, and in one case with a full set of teeth, surrounded by symmetrically arranged curvilinear tracery. The face-like designs on the chisel exhibit a sufficiently close similarity to that on the primitive Style I *chüeh* excavated from P'an-lung-ch'eng, Huang-p'i-hsien, Hupei, to suggest that the late stage of the Lung-shan culture represented at Liang-ch'eng-chen may have lasted even into the earliest phase of the Chinese Bronze Age.¹⁸⁾

The general stylistic evolution of the Shantung Lung-shan pottery may be summarized as follows; the Hua-t'ing phase, in evidence at Kang-shang, Yeh-tien, the lower level at Ta-wen-k'ou, and during the earliest stage at Ch'eng-tzu is characterized by vessels usually betraying slight irregularities in shape, but of a delicate and sometimes almost fragile aspect, which results primarily from the excessively tall legs or stems that support many of the vessels and from the elaborate openwork designs that embellish the stems of the *tou*. Buff or light red are the dominant colors of the ware; grey occurs, while black is hardly in evidence.

The same variety of buff, and some light grey ware is also typical of the pottery from the lower level of Hsi-hsia-hou, but, by contrast to those of the preceding phase, the vessels are more standardized, more perfectly symmetrical in shape, and the surfaces are more even. The amount of openwork on the stems of the *tou* is greatly reduced and the patterns are simplified or abbreviated. With the second Hsi-hsia-hou phase, also seen at Tung-hai-yü I and San-li-ho I, the vessels take on a decidedly mannered appearance. There is a particular insistence on dissociating the various parts of the vessel from each other; in the case of the *tou* and *pei*, the stem is contracted in width and thus more emphatically set off from the bowl and the foot. The bowl of the *pei* becomes, almost perversely, concave in profile. Far greater stress upon the silhouette results from the emergence of dark grey and black as the dominant color of the ware. Openwork is retained, but it no longer counts as a feature of special emphasis.

During the classical Lung-shan period, as represented by the latest stage at Tung-hai-yü II, by San-li-ho II, and Yao-kuan-chuang and by the Late Stage I at Ch'eng-tzu, the vessels, by contrast to the foregoing styles, whether of egg-shell

ware or heavily potted, are far more refined and regal, owing in part to the effects produced by the increased use of the fast wheel. The vessels look, many of them, like so many pieces from some fantastic chess set. Finally, during the late Lung-shan period, as exemplified by Liang-ch'eng-chen and the Late Stage II at Ch'eng-tzu, the vessels are in general more assertively substantial in appearance, while egg-shell ware becomes less common. Decoration now consists primarily of raised horizontal ribs and appliqué bands, with great attention to such features as lugs and handles: in other words, the decoration has become 'additive' in nature, rather than 'subtractive,' as in the earlier styles, when openwork was the preferred form of embellishment.

From the foregoing analysis we may conclude that the sites in northern Kiangsu and Shantung belong to one and the same cultural complex and that the pottery found in these two areas exhibits an internally consistent and uninterrupted evolution, climaxing with the predominantly wheel-made black wares of the later Lung-shan stages. The periodization of this eastern culture is as follows: the Ch'ing-lien-kang phase preceded Liu-lin I and II, which in turn are succeeded by the Hua-t'ing phase; the Hua-t'ing phase is closely contemporary with the Ta-wen-k'ou stage in Shantung, which is followed by Hsi-hsia-hou I and II; the upper level at Hsi-hsia-hou is approximately contemporary with the earliest of the three sequential phases at Tung-hai-yü. In turn, the period represented by Tung-hai-yü and by other related sites, is followed by Liang-ch'eng-chen and the Late Stage II at Ch'eng-tzu, which mark the end of our series.¹⁹⁾

<i>Northern Kiangsu</i>	<i>Central Shantung</i>	<i>Eastern Shantung</i>
Ch'ing-lien-kang		
Liu-lin I		
Liu-lin II		
Hua-t'ing	Yeh-tien, Kang-shang, Ta-wen-k'ou	Ch'eng-tzu early stage
	Hsi-hsia-hou I	
	Hsi-hsia-hou II	Tung-hai-yü I, San-li-ho I Tung-hai-yü II
		Tung-hai-yü III San-li-ho II
		Classical Lung-shan Yao-kuan-chuang Ch'eng-tzu late stage I
		Late Lung-shan Liang-ch'eng-chen, Ch'eng-tzu late stage II

2 Honan

We are now in a position to correlate the various stages of the independent eastcoast Lung-shan culture with the developments in the Central Plains. In the preceding chapter we have arrived at the following assessment: the Ch'ing-lien-kang culture, carbon-dated to (ZK90) 4494 ± 200 B.C. is close in time to the Pan-p'o culture in the Chung-yüan (ZK 38: 4770 ± 135 B.C. — ZK 127: 4290 ± 200 B.C.). The succeeding Liu-lin phases, due to the intrusive painted ware bowls in many of the burials, is to be equated chronologically with the florescence of the Miao-ti-kou culture. The Kiangsu Hua-t'ing phase, on the basis of unpublished sherds from Hua-t'ing level Ta-tun-tzu, said to be similar to those from Ch'in-wang-chai, is loosely correlated with the late Miao-ti-kou/Yang-shao-ts'un phase.²⁰⁾

But since we have reason to believe that Yeh-tien, Kang-shang and the lower level at Ta-wen-k'ou are the Shantung equivalents of the Kiangsu Hua-t'ing phase and contemporary with it, we are able to provide at least some additional evidence for the contemporaneity of the Hua-t'ing phase in these two provinces with the last phase of the painted ware in Honan. First, at Ta-wen-k'ou we find one vessel painted with a horizontal band filled by a trellis pattern,²¹⁾ which is precisely one of the main traits of certain vessels belonging to the late Miao-ti-kou/Yang-shao-ts'un period (Figure 186).²²⁾ Secondly, at the late painted ware site of Ta-ho-ts'un in Honan we find a small oval-bodied *hu*, rounded at the bottom and with a prominent cylindrical neck (Figure 187)—a simple enough form, but one seemingly unprecedented in the Chung-yüan. An exact counterpart of this *hu* is known from Yeh-tien and several close approximations of it from Ta-wen-k'ou;²³⁾ one of the Ta-wen-k'ou examples incorporates in its painted décor a circular motif with a central dot, similar to that found on the Ta-ho *hu*.²⁴⁾ These shared features further suggest the correspondence of the Miao-ti-kou/Yang-shao-ts'un phase with the Hua-t'ing/Ta-wen-k'ou phase. On the basis of the carbon-14 dates for Ta-ho, we may assume that the Hua-t'ing stage likewise dates around 3000 B.C.²⁵⁾

In what manner, then, can the unpainted *tou* and *ting* at Ta-ho (Figures 188–189) be accounted for? The analogies that can be provided are not exact; but it is worth noting that the feet on the Ta-ho *ting* are radially oriented and wedge-shaped, a typical feature of the Hua-t'ing stage *ting*. The Ta-ho version of the *ting* with relatively straight wall and gently rounded underside is found at Yeh-tien.²⁶⁾ The *tou* with shallow bowl from Ta-ho is similar in form to those from the upper level at Ta-tun-tzu,²⁷⁾ but the almost straight-sided ring foot with small circular perforations is both shorter and more simple than those from the Hua-t'ing sites. The large grey ware amphora from Ta-ho, unparalleled in the Chung-yüan, also exhibits similarities to those from the Hua-t'ing phase at Ta-tun-tzu.²⁸⁾

Additional weight to support the argument for the equivalence between Ta-ho-ts'un and the Hua-t'ing phases is brought to bear by excavations at the site near

Ku-shui-ho, Yü-hsien, to the southwest of Cheng-chou.²⁹⁾ This site, which may assume considerable importance in future discussions of these matters, was found to contain a mixture of Yang-shao and Lung-shan material, coeval with Ta-ho, but including a far more extensive range of Lung-shan forms. Among the most significant is the *pei* with angular bowl and large triangular perforations at the stem, for which the exact counterpart exists at Kang-shang.³⁰⁾ This particular vessel seems to occur at no site that can be distinguished as later than the Hua-t'ing phase.

Thus we may say that those forms at Ta-ho that seem like deviants in the context of the Chung-yüan painted pottery tradition are best to be explained as ideas emanating from the Hua-t'ing culture in Kiangsu and Shantung; they probably are not inventions of the Honan potters, but intrusions from the southeastern cultures, where the history of such forms reaches back a millennium in time. On the other hand, that the presence of the unpainted elevated vessels in Honan does not signify any massive migration or invasion from the east, but a less overpowering form of contact, is verified by the fact that these new vessel forms at Ta-ho stand side by side with the old Chung-yüan forms, the painted ware *po* and the cord-impressed *kuan*.

We may feel that Ta-ho-ts'un is the 'transitional phase' signalling the introduction of the Lung-shan pottery tradition into Honan. Soon thereafter the Chung-yüan apparently altogether relinquished its painting tradition, which to judge from the evidence at Ta-ho-ts'un, had already fallen into decadence perhaps as early as 3000 B.C. There gradually evolved a new style of unpainted vessels, based upon a combination of ancient Chung-yüan forms (including corded ware largely alien to the southeast Lung-shan tradition) with new forms derived primarily from the Lung-shan complex in the east.

To date, the Lung-shan culture in the Chung-yüan area and westward into Kansu during the long period of time from approximately 3000–2000 B.C. is known to us chiefly by way of the following major sites:³¹⁾

Cheng-chou, K'o-la-wang-ts'un
Yen-shih, Erh-li-t'ou I
Lo-yang, Wang-wan III, Tung-kan-kou
Hsi-ch'uan, Hsia-wang-kang late II
Mien-ch'ih, Pu-chao-chai
Shan-hsien, San-li-ch'iao II
Hsi-an, K'o-hsing-chuang II
the Ch'i-chia sites in Kansu

The carbon-14 dates available for Wang-wan III (ZK: 126: 2390±145 B.C.) and for the Ch'i-chia finds at Ta-ho-chuang (ZK 15: 2050±115 B.C. and ZK 23: 2015±115)³²⁾ indicate that the Lung-shan pottery represented at these widespread but otherwise quite closely related sites is a comparatively late manifestation of a style that had been initiated as much as a thousand years previously. Needless to

say, the date of (ZK 111) 2780±145 B.C.³⁹) for Miao-ti-kou II would take us farther back in time. But the Miao-ti-kou II pottery may in part be the result of a localized intrusion of the southern branch of the Lung-shan culture, namely Ch'ü-chia-ling, and hence may not be fully representative of the earlier Honan Lung-shan as a whole.

Thus it would seem that for the time being we are unable to visualize the Lung-shan style that followed directly upon Ta-ho-ts'un and, acknowledging this lacuna, must progress toward a consideration of the later Chung-yüan Lung-shan style for which evidence is more abundant, and to the early Shang pottery which followed in its place. The distinction between these two styles is pronounced. The Lung-shan style is characterized by a preference for relatively simple and unadorned vessels emphasizing a clear and controlled profile unhampered by pronounced rims, heavy handles or appliqué. It is the thinness and refinement and the thin-walled character obtainable through the new technology of the potter's wheel that were the major objectives of the craftsmen. The stress on contour accords judiciously with the increased use of grey and black ware, for these darker wares potentially stand out more strongly against their surroundings than did the reddish ware of the Yang-shao culture. Painted decoration applied to these vessels would have been unwanted, and indeed the simple, clean and often gleamingly polished new vessels must have come as a relief, a sort of clearing wind, after centuries of the demanding, complex and bolder polychromic wares.

The early Shang pottery by contrast takes recourse to a ware of increased heaviness, and its bulk is further asserted by precisely those features which were absent during the Lung-shan phase: heavy appliqué, prominent handles, and a tendency, indigenous to the Chung-yüan and maintained on unpainted ware from Pan-p'o or even earlier times onward, to roughen the surface with cord marks and other impressed patterns.

The Chung-yüan Lung-shan sites listed above are noted for certain characteristic vessels: (1) the *tou* with shallow bowl and a broad stem in openwork (Figure 238 left); (2) a second version with slender stem flaring at the base (Figure 238 right); (3) a shallow bowl with pinched rim, or mortar, whose more advanced forms are later seen at Erh-li-t'ou (Figures 239, 245); (4) pouring vessels of various shapes and sizes whose rim is pinched in scallop fashion to form a pouring channel (Figure 240); (5) the *kuan* with a wide mouth, its sides tapering two thirds the way down, where the vessel again broadens, then tapers to a narrow base;⁴⁰) (6) the oval-shaped *kuan* whose outer surface is covered by an impressed honeycomb pattern;⁴¹) and (7) the mug with a single handle.⁴²)

While the first type of *tou*, akin to the Hua-t'ing variety on account of its openwork stem, is perhaps to be explained as the retention of a form transmitted to the Chung-yüan at an earlier date, there would seem again to be no exact analogies that can be drawn between these Chung-yüan Lung-shan vessels and those in Shantung, with one exception: the bowl with pinched rim, in evidence at

such sites as San-li-ch'iao II and K'o-la-wang-ts'un, exhibits a marked likeness to those at Hsi-hsia-hou II.³⁷⁾ That the more refined of the Chung-yüan Lung-shan vessels are typically dark grey or black and their bodies of almost egg-shell thinness, however, are features shared by vessels of the somewhat later classical Lung-shan period in Shantung, and it is with these that they are more likely to be approximately contemporary.

The most westerly manifestation of the Lung-shan culture in evidence in the Hsi-an area and in Kansu is characterized particularly by certain vessel shapes, the drinking vessel with two handles, known from K'o-hsing-chuang II and the Ch'i-chia-p'ing sites being one of the most common, along with the vase-shaped *kuan*. The ancient Kansu form of the amphora too is adapted to the new Lung-shan aesthetic.³⁸⁾ In addition, there is the distinctive *ho* based upon a sheet metal prototype (Figure 241). This vessel, previously in evidence in Kansu, has also been discovered in the Lung-shan stratum at Hsia-wang-kang, Hsi-ch'uan in southwestern Honan (Figure 242).³⁹⁾

One of the Ch'i-chia sites, that of the Ta-ho-chuang in Yung-ch'ing-hsien, has been carbon-dated to (ZK 15) 2050 ± 115 B.C. and (ZK 23) 2015 ± 115 B.C.⁴⁰⁾ The absolute date for Ta-ho-chuang gains a special significance owing to the discovery of a copper knife and other assorted pieces of metal unearthed at this site.⁴¹⁾ Thus it may now be said conclusively that China had entered the chalcolithic period at least this early. Moreover, ox scapulae drilled with a series of circular incisions were unearthed at several of the Ch'i-chia sites and at K'o-hsing-chuang II,⁴²⁾ providing documentation of the practice of scapulimancy. That no specific correlations can be drawn between the wares of the westernmost Lung-shan sites and those of the east coast is, on the other hand, to be expected.

If we remain unable to provide very much by way of firm evidence for the precise chronological relationship between the Chung-yüan and Kansu pottery and the various Shantung styles during the more advanced phases of the Lung-shan period, we fare somewhat better in the case of the Honan wares produced around the beginning of Shang, as represented by the site of Erh-li-t'ou.

Erh-li-t'ou would appear to be parallel to the Shantung phase seen at Liang-ch'eng-chen and to the late stage II at Ch'eng-tzu. In both cases the wares are heavier, or less delicately potted, and less angular in articulation than before, and they are decorated in the main by widely spaced circumferential incised lines or raised ribs. More specifically, the pottery from the second level at Erh-li-t'ou exhibits three features important in this regard. The first of these is the *tou* with rounded bowl supported by a stem of medium diameter whose foot ends with a thicker circumferential band (Figure 243). This particular treatment of the foot is also a characteristic of the *tou* and *tou*-shaped *pei* from the late stage II at Ch'eng-tzu (Figures 229, 230).⁴³⁾ So too the lugs on the *hu* from Erh-li-t'ou II may be likened to those on the *lei* from the same late phase at Ch'eng-tzu (Figures 244, 235). No less significant is the *ting* from Erh-li-t'ou II, strikingly decorated by the

application of evenly spaced serrate strips to its entire surface (Figure 247). This mode of decoration is found on vessels from the roughly contemporary sites of Ts'o-li and Tung-ma-kou near Lo-yang and at Ch'i-li-p'u.⁴¹) It is also seen on a lid from the final phase at Ch'eng-tzu (Figure 248).

An innovation perhaps even more strongly suggestive of a relationship between Liang-ch'eng-chen and Erh-li-t'ou II is the incised decoration present at both sites of partially representational intent. At Liang-ch'eng-chen we have noted the jade chisel incised with faces described in symmetrical scrollwork and pottery sherds bearing apparently similar designs (Figures 236, 237). Likewise on a sherd from Erh-li-t'ou II we find a snake-like head with prominent eyes, its body bifurcated above its head, which again is surrounded by symmetrical scrollwork (Figure 246). The design differs from that at Liang-ch'eng-chen mainly in its less angularized, less constricted and less sinister configuration.⁴²)

On the whole, the pottery of Erh-li-t'ou is softer in its contours, and more comfortable and gentle in aspect; and while it often betrays an experimental touch, it is generally less refined than that from Liang-ch'eng-chen, which seems to have found assurance in the ancient and uninterrupted tradition from which it grew.

What then, can be said of Ch'eng-tzu-yai near the town of Lung-shan-chen, which has given its name to the entire eastcoast culture. For many reasons—the presence of *ting* legs of concave section, the particular form of the *kuei*, the high percentage of wheel-made wares and the use of widely spaced circumferential ribs as a preferred mode of decoration⁴³)—the pottery from the lower level at Ch'eng-tzu-yai is more closely affiliated with Liang-ch'eng-chen than with any other Shantung style; yet most of it gives the impression of being later in time and may represent that style in its decline.

The vessels from Ch'eng-tzu-yai exhibit little resemblance to those from Erh-li-t'ou, and instead their closest analogues are the vessels from Erh-li-kang at Cheng-chou and from the Hsiao-t'un complex at Anyang. An important item in this regard is the fragmentary *chia*⁴⁴) from the lower stratum at Ch'eng-tzu-yai, although one of the most revealing comparisons relates a deep, oval-bodied *kuan* with longitudinally perforated lugs on each side (Figure 250), also from the lower stratum, to a vessel like character from HPKM 1380 at Anyang (Figure 249).⁴⁵)

Thus, Ch'eng-tzu-yai, long considered as a type site for the Lung-shan culture at large, is probably to be assigned not to neolithic times at all, nor even to the earliest phase of the Chinese bronze age exemplified by Erh-li-t'ou, but rather to the early centuries of Shang. The pottery of Ch'eng-tzu-yai is of minor significance from an aesthetic point of view, but it suggests two things: that the Lung-shan tradition in Shantung continued into Shang, while the presence of the *chia* is one indication that the eastcoast culture in its late phase had, for nearly the first time in its long history, begun to absorb into its ceramic tradition forms from Central China.⁴⁶)

In summary, then, the following chronological correlations between the eastcoast Lung-shan tradition and the developments in the Chung-yüan region may be proposed:

	Eastcoast Lung-shan	Chung-yüan
ca. 4500 B. C.	Ch'ing-lien-kang	Pan-p'o
	Liu-lin I	Miao-ti-kou
	Liu-lin II	(florescence of painted ware)
ca. 3000 B. C.	Hua-t'ing	Miao-ti-kou/Yang-shao-ts'un
		(termination of painted ware)
	Hsi-hsia-hou I	
	Hsi-hsia-hou II	Honan Lung-shan
ca. 2000 B. C.	Tung-hai-yü III	
	San-li-ho II	
	Yao-kuan-chuang	
	Liang-ch'eng-chen	Erh-li-t'ou II (pre-dynastic Shang?)
ca. 1500 B. C.		Erh-li-kang (early dynastic Shang)
	Ch'eng-tzu-yai	
ca. 1300 B. C.		Anyang

Having discussed the formation of the painted pottery styles in the Chung-yüan and the developmental sequences of the independent Lung-shan culture, whose origins lie equally far back in time in southern and eastern China, I wish to offer the hypothesis that the Shang civilisation came to be constituted by the amalgamation of these two separate cultures. During the florescence of the Miao-ti-kou style, whose own pottery designs likely derived from Kansu, the peoples of the Chung-yüan began to penetrate into the regions of the south and southeast. The subsequent Miao-ti-kou/Yang-shao-ts'un period witnessed the disintegration of the Miao-ti-kou painting style; contact with the southeastern culture, and particularly with the specific branch the Kiangsu and Shantung areas, intensified; and the Chung-yüan people, as their own pottery style had declined, found the vessel forms cultivated by their eastern neighbors sufficiently attractive to adopt them into their own culture. Such contacts between the two cultures must have continued throughout the Chung-yüan Lung-shan period; they resulted in the Central Chinese repertory of unpainted, and later burnished black, vessels elevated from the ground by a foot of one kind or another. These new pottery shapes supplanted the older repertory of painted wares and came to stand side by side with the coarser cord-impressed ware—the *kuan* and similar vessels—which continued altered but unabated.

Had such contacts not occurred, the Shang civilization would doubtless have taken a different form. It seems fair to assume that the advanced jade craft in evidence so early in the southeast must have provided a strong impetus to the Chung-yüan Lung-shan and early Shang craftsmen. The practice of plastromancy suggested by the ritualistic boring of turtle shells as early as Hua-t'ing times is likely the ultimate source for Shang divination, for there is no evidence of it in the Chung-yüan in pre-Lung-shan times. In the southeast, too, we find the probable source of ceremonial drinking, vital to the Shang sacrificial rites. Drinking vessels of any significance are conspicuously absent from the painted pottery cultures both in Kansu and Central China, while the production of elaborate drinking vessels, and also of pouring vessels, reaches in the southeast back into the remote past. The Chung-yüan Lung-shan and later Shang artists either failed to adopt or failed to retain the goblet, opting instead for the simpler *ku*, also long known in the southeast;⁴⁰) and they evolved their own versions of the pouring vessels, resulting in the long history of the *chüeh* and *ho*.

It is, then, conceivable that two features of overriding importance to the Shang—the ritual of divination and ceremonial drinking—may be attributed to the eastcoast culture. But considerably more significant from the point of view of the art historian was the adoption by the Chung-yüan culture of characteristic eastcoast vessel forms, that determined forever that the bronze vessels would invariably be elevated from the ground, either by a circular foot or by legs.

The earliest metal vessels, in style assuredly close to the unadorned form of the late Honan Lung-shan and Ch'i-chia age *ho*, are yet unexcavated. It was the decision of the early Shang craftsmen to add surface decoration to the vessels, in view particularly of the fact that black pottery vessels can hold their own primarily on the merits of their strong silhouette, whereas the gleaming newly cast bronze vessels, to the contrary, whose contours would have appeared less pronounced, required that their surfaces be controlled by means of designs in either raised or sunken lines. The craftsmen were perhaps caught unprepared for such an eventuality, for after the demise of the painted pottery there was no tradition of designs on vessels equal to the newly emerging decorative task.

Designs vaguely suggestive of faces, but rendered as largely geometrical formulations are found at Liang-ch'eng-chen. They would seem not unrelated to the creatures of early Shang bronze decoration, in which eyes in scrollwork dominate. For the present it is a matter of pure speculation whether these early incised designs were initially conceived by Shantung or by Chung-yüan artists, for there appears to be no prior history of such designs in either culture. If indeed they were initiated in Shantung they would have been acceptable as a source of inspiration to the Chung-yüan Shang artists chiefly because they were adaptable to the ancient visual language of complex geometric designs which had dominated that region for so long and which had survived the Lung-shan age, presumably in some other medium than the art of the vessel.

Notes to Chapter VIII

¹⁾ The custom of symmetrical tooth extraction, presumably some form of initiation rite, is one other cultural characteristic linking the neolithic peoples of the Chinese coastal areas. See P'an Ch'i-feng, *KK* (1981/1), 64–76.

²⁾ Pottery representing two phases of the Liu-lin culture, as well as the later Hua-t'ing stage, has been recovered from burials at Wang-yin in Yen-chou-hsien (Hu Ping-hua, *KK* 1979/1, 5–14; at Wang-yin materials from ashpit 37 in T 2105 (Liu-lin stage) and from T 249 (Hua-t'ing stage) have yielded radio-carbon dates of 5950 ± 125 B. P. (4000 B. C.) and 5225 ± 130 B. P. (3275 B. C.), respectively (*ibid.*, 26). Several graves in the second stratum (Hua-t'ing stage) were found to contain bowls decorated with Miao-ti-kou patterns or with those typical of the local Kiangsu style (*ibid.*, p. 13, fig. 10; pl. 4: 1–2).

³⁾ *WW* (1972/2), 25–30.

⁴⁾ *Ibid.*, p. 29, fig. 11.

⁵⁾ Wang Ssu-li and Chang-Ying-chü, *KK* (1963/7), 351–361; pls. 4–7; *Ta-wen-k'ou*, (Peking, Wen-wu Press, 1974). Farther to the east the Hua-t'ing phase in Shantung is represented by period I at Ch'eng-tzu in Chu-ch'eng-hsien, although differences are to be noted in the treatment of the *kuei* which is often provided with a tubular spout projecting outward from the neck and separate from the larger opening at the top of the neck. See Tu Tsai-chung, *KKHP* (1980/3), 331–337; pls. 4–5.

⁶⁾ *KK* (1963/7), pl. 7: 6; p. 360, fig. 11: 5; pl. 5: 12.

⁷⁾ *Ibid.*, pl. 6: 7; p. 356, fig. 6.

⁸⁾ *Ta-wen-k'ou*, pl. 74: 8, 9; pl. 75: 1–2, 4–6; pl. 76: 2–4; pl. 86: 2.

⁹⁾ Kao Kuang-jen and Jen Shih-nan, *KKHP* (1964/2), 57–106, pls. 1–12.

¹⁰⁾ *Ibid.*, p. 85, fig. 18.

¹¹⁾ *Kuei* characteristic of Hsi-hsia-hou I and II are seen too at Ta-wen-k'ou (*Ta-wen-k'ou*, pl. 78).

¹²⁾ Pottery comparable to that from Hsi-hsia-hou II has been uncovered at Shang-chuang, Ch'ih-p'ing-hsien (period I); Wang Ssu-t'ien at al., *WW* (1978/4), 35–40; figs. 1–2; 43, fig. 10. The Hsi-hsia-hou pottery styles are also known to have penetrated into the area of present-day Honan. Vessels of the Hsi-hsia-hou I type were found in Shang-shui-hsien (*KK*, 1981/1, 88); others of the Hsi-hsia-hou II type are seen at P'ing-ting-shan-shih (Chang T'uo, *KK*, 1977/5, 353).

¹³⁾ *KK* (1976/6), 378–382, 377, pls. 5–6; Wu Ju-tso, *KK* (1977/4), 262–267, pls. 1–3, 12. Radio-carbon dates for M 2112 at San-li-ho I (Hsi-hsia-hou II level) of (ZK 362–0) 2090 ± 115 B. C. and (ZK 364–0) of 1810 ± 145 B. C. for San-li-ho II are unexpectedly late (Kao Kuang-jen, *KKHP*, 1978/4, 417). It is noteworthy, however, that small objects of metal were found in M 203 in the upper level (Wu Jo-tso, *KK*, 1977/4, 266).

¹⁴⁾ *Pei* of the same type as those seen at Tung-hai-yü were found at Ta-fan-chuang, Lin-i-hsien (Liu Hsin-chien and Yang Tien-hsü, *KK*, 1975/1, 20, fig. 8, pls. 2–3) and in burial 19 belonging to the late Stage I at Ch'eng-tzu; Tu Tsai-chung, *KKHP* (1980/3), 377, fig. 16; 352, fig. 18. Also see note 5 above.

¹⁵⁾ *KK* (1977/4), 262–267, pls. 1–3, 13; Cheng Hsiao-mei, *KK* (1963/7), 347–350; Tu Tsai-chung, *KKHP* (1980/3), 377, 353, fig. 19; 356, fig. 22.

¹⁶⁾ Liu Tun-yüan, *KKHP* (1958/1) 25–42, pls. 1–8; *KK* (1960/9), 10–14, pl. 3; *KKHP* (1980/3) 377; 351, fig. 17; 354, fig. 20; 355, fig. 54; and chart p. 376.

¹⁷⁾ Liu Tun-yüan, *KKHP* (1972/4), 56–57.

¹⁸⁾ Also see Jessica Rawson, *Ancient China: Art and Archaeology* (London, 1980) pp. 39–40, 78–79. While some kind of connection between the patterns on the Liang-ch'eng-chen jade chisel and the P'an-lung-ch'eng *chüeh* would seem undeniable, the exact relationship between them, which may have some bearing on the important question of the origins of the *t'ao-t'ieh*, remains undetermined.

The several jade *tsung* with designs of faces spanning their corners excavated from tombs 1 and 198 at the newly published site of Ts'ao-hsieh-shan, Wu-hsien in southern Kiangsu will doubtless play a role in the solution of this problem once their date has been ascertained (*Wen-wu tzu-liao ts'ung-k'an*, vol. 1, 1980, 12, figs.

23–24, pl. 3: 1). Material from the lowest of the ten strata recognized at Ts'ao-hsieh-shan has yielded two radio-carbon dates: 6275 ± 205 B. C. and 6015 ± 145 B. C. (*ibid.*, p. 4). This level is considered to be equivalent to the lower level at Ma-chia-p'eng (*ibid.*, 3). No carbon-dates are yet available for the second level at Ts'ao-hsieh-shan in which the *tsung* were found, but this is described as belonging to the Liang-chu culture for which there are carbon-14 dates ranging from (ZK 97) 3305 ± 130 B. C. to (ZK 254) 2250 ± 145 B. C. (Hsia Nai, *KK*, 1977/4, 230–231). It is also noteworthy that the surface of a *hu* from M 198 at Ts'ao-hsieh-shan is ornamented with finely incised patterns akin to those seen at Liang-ch'eng-chen (*Wen-wu tzu-liao ts'ung-k'an*, p. 22 fig. 69: 2).

Other jade implements comparable to the Liang-ch'eng-chen chisel are illustrated and discussed by Doris Dohrenwend, "Jade Demonic Images from Early China," *Ars Orientalis* vol. 10, (1975), 55–78.

¹⁹⁾ This periodization is in agreement with that proposed by Kao Kuang-jen in 1979 (*KK*, 1979/11, 56–62). Reports published within the last five years of a number of sites in western Shantung — all within fifty miles of the Honan border — suggest that most of the pottery in this region is composed of a varying mixture of late Shantung Lung-shan and of Honan Lung-shan types, including the honey-comb *kuan*. In many cases the Lung-shan levels at these sites are overlaid by a later stratum containing Shang pottery of a variety entirely characteristic of Honan. These sites include: Shang-chuang, Ch'ih-p'ing-hsien (Wang Ssu-t'ien et al., *WW*, 1978/4, 35–45); Ch'ing-ku-tui, Liang-shan (Wu Ping-nan and Kao P'ing, *KK*, 1978/6, 402–408); and Hsin-chung-chi, Ts'ao-hsien (Chih T'ien-fu, *KK*, 1980/5, 385–390, pl. 1).

²⁰⁾ That the Liu-lin phases in Kiangsu are contemporary with Miao-ti-kou is also suggested by the available carbon-14 dates of (ZK 110) 3910 ± 125 B. C. for Miao-ti-kou and (ZK 461) 4000 ± 125 B. C. for the Liu-lin phase at Wang-yin in Shantung (Hsia Nai, *KK*, 1977/4, 229 and Kao Kuang-jen, *KKHP*, 1978/4, 417; respectively). Similarly, the carbon date for F 20 belonging to the Miao-ti-kou-/Yang-shao-ts'un phase at Ta-ho-ts'un — (BK 76004) 3070 ± 200 B. C. — and that of (ZK 463) 3275 ± 130 B. C. for the Hua-t'ing phase at Wang-yin (*KK* 1977/4, 229; and *KKHP* 1978/4, 417) corroborates the theory that the Miao-ti-kou/Yang-shao-ts'un and Hua-t'ing phases are close in time.

²¹⁾ *Ta-wen-k'ou*, pl. 43: 5.

²²⁾ See also T. J. Arne, *Stone Age Pottery from the Province of Honan* (Peking, 1925), pl. 7: 18–20.

²³⁾ *WW* (1972/2), 36, fig. 20.

²⁴⁾ *Ta-wen-k'ou*, pl. 41.

²⁵⁾ See note 20 above.

²⁶⁾ *WW* (1972/2), 29, figs. 11–13.

²⁷⁾ *KKHP* (1964/2), pl. 9: 1–2.

²⁸⁾ *KK* (1973/6), 335, fig. 6, left; *KKHP* (1964/2), pl. 15:2.

²⁹⁾ *KK* (1978/1), 25–30, pls. 8–9.

³⁰⁾ *Ibid.*, p. 29, fig. 8: 14; pl. 8:6; *KK* (1963/7), pl. 5:7.

³¹⁾ Chao Ching-yün and Liu Tung-ya, *KKHP* (1958/3), 41–62; pls. 1–8 [K'o-la-wang]; Feng Yu-sheng *KK* (1965/5), 215–224; pls. 1–9 [Erh-li-t'ou]; Li Yang-sung and Yen Wen-ming, *KK* (1964/4), 174–178; pls. 2–4 [Wang-wan III]; *KK* (1959/10), 537–540 [Tung-kan-kou]; *WW* (1972/10), 6–19 [Hsia-wang-kang]; J. G. Andersson, *BMFEA* 19 (1947), 78–108, pls. 86–126 [Pu-chao-chai]; *Miao-ti-kou yü San-li-ch'iao*, pp. 92–102, pls. LXXX–XCII [San-li-ch'iao II]; *Feng-hsi fa-chüeh pao-kao*, pp. 43–69, pls. XXV–XXVI [K'o-hsing-chuang II]; M. Bylin-Althin, *BMFEA* 18 (1946), 383–429; Cheng Nai-wu and Hsieh Tuan-chü, *KK* (1960/3), 9–12; *idem*, *KK* (1964/6), 267–269; Kuo Te-yung, *KKHP* (1960/2), 53–71; Hsieh Tuan-chü, *KKHP* (1975/2) 57–96, pls. 1–12; Wei Huai-heng, *KKHP* (1978/4), 421–448, pls. 1–12 [Ch'i-chia sites].

³²⁾ Hsia Nai *KK* (1977/4) 229–230.

³³⁾ *Ibid.*, p. 229.

³⁴⁾ *Miao-ti-kou yü San-li-ch'iao*, pl. LXXXIII: 3, 4; Chao Ching-yün and Liu Tung-ya, *KKHP* (1958/3), pl. 1: 12; *KK* (1959/10), pl. 6: 2; Andersson, *BMFEA* 15 (1943), pl. 29: 2.

³⁵⁾ *Miao-ti-kou yü San-li-ch'iao*, pl. LXXX: 4; Chao Ching-yün and Liu Tung-ya, *KKHP* (1958/3), pl. 3: 5; *KK* (1959/10), pl. 6: 5; *WW* (1972/10), 19, fig. 45.

³⁶⁾ *Miao-ti-kou yü San-li-ch'iao*, pl. LXXXV: 4; Chao Ching-yün and Liu Tung-ya, *KKHP* (1958/3), pl. 3: 3.

³⁷⁾ Kao Kuang-jen, *KKHP* (1964/2), pl. VIII: 3–4.

³⁸⁾ *Feng-hsi fa-chüeh pao-kao*, pl. XXXVI: 5. Hsieh Tuan-chü has discussed the evolution of Ch'i-chia pottery at Ta-ho-chuang and at Ch'in-wei-chia, where in each case two separate strata can be recognized (*KK*, 1980/3, 248–254). The changes in style are undramatic.

³⁹⁾ *WW* (1972/10), 18, fig. 42.

⁴⁰⁾ Hsia Nai, *KK* (1977/4), 230.

⁴¹⁾ Cheng Nai-wu and Hsieh Tuan-chü, *KK* (1960/3), 10–11, pl. 1: 6; pl. 2: 5; *KKHP* (1974/2), 53–55, pl. 18: 10. Metal was found at Huang-niang-niang-t'ai, Wu-wei (Kuo Te-yung, *KKHP* 1960/2, 59–60) and at Ch'in-wei-chai, Yung-ching (Hsieh Tuan-chü, *KKHP*, 1975/2, 87–88, pl. 12: 14–19).

⁴²⁾ Kuo Te-yung, *KKHP* (1960/2), 58–59; *KKHP* (1974/2), 55–56, pl. 7; Hsieh Tuan-chü, *KKHP* (1975/2), 87; *Feng-hsi fa-chüeh pao-kao*, pl. XXXV: 1–2.

⁴³⁾ A *tou* that compares closely with those at Ch'eng-tzu late stage II has also been recovered from Tung-ma-kou near Loyang, a site which is equated with Erh-li-t'ou II; Feng Hsiao-lien, *KK* (1978/1), 21, fig. 6: 2.

⁴⁴⁾ Sui Yü-jen and Feng Hsiao-lien *KK* (1978/1), 15, fig. 14: 1; *Hsin Chung-kuo ti k'ao-kü shou-huo*, pl. XXVII: 1–2.

⁴⁵⁾ In regard to jades specifically, a similar distinction can be drawn between the designs on the Liang-ch'eng-chien chisel and those on the handle-like object of green nephrite which is believed to be of the third period at Erh-li-t'ou. Two sections of the handle show human heads that span the corners, *KK* (1976/4), 262, fig. 6: 1; pl. 6: 2, right (in color).

⁴⁶⁾ Fu Ssu-nien, Li Chi at al., *Ch'eng-tzu-yai*, pl. XIV: 22–27, pl. XXVI: 2 (*ting* fragments); pls. XXVII, XXIX (*kuai*).

⁴⁷⁾ *Ibid.*, pl. XXII: 5.

⁴⁸⁾ It should be remarked, however, that the *kuan* from HPKM 1380 is covered by a greyish-yellow feldspathic glaze; see Li Chi, *Hsiao-t'un*, vol III: *Artifacts*, p. 67, pl. XV, top.

⁴⁹⁾ The pottery of Ch'eng-tzu-yai is allied to that from previously mentioned sites in the western part of the province where a mixture of Shantung and Honan features prevails; see note 19. Ch'eng-tzu-yai, however, may be later than these.

⁵⁰⁾ The earliest occurrence of the *ku*-shaped drinking vessel appears to be at Liu-lin (Yin Huang-chang et al., *KKHP*, 1965/2, 38, fig. 28: 1). It has also been found in the Liu-lin I stratum at the Shantung site of Wang-yin (Hu Ping-hua, *KK*, 1979/1, 8, fig. 3: 1; p. 9, fig 5: 5).

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Abbreviations

BMFEA	<i>Bulletin of the Museum of Far Eastern Antiquities</i>
KK	<i>K'ao-ku</i>
KKHP	<i>K'ao-ku hsüeh-pao</i>
KKTH	<i>K'ao-ku t'ung-hsün</i>
WW	<i>Wen-wu</i>
WWTCTL	<i>Wen-wu ts'an-k'ao tzu-liao</i>

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Figure 106 Bowl sherd. Museum of Far Eastern Antiquities. MCY 12001: 789. Sand-colored ware; black paint discolored to blue. D. 15 cm. Author's photograph.

Figure 107 Side of an amphora. Museum of Far Eastern Antiquities. K 3052: 19. *Ibid.*, pl. 57: 10. Author's photograph.

Figure 108 Bowl sherd. Museum of Far Eastern Antiquities. K 12001: 679. *Ibid.*, pl. 26: 5. Author's photograph.

Plate 42 Ma-chia-yao Style Four

Figure 109 Bowl sherd. Museum of Far Eastern Antiquities. K 12001: 75. *Ibid.*, pl. 41: 1. Author's photograph.

Figure 110 Rim of a bowl. Museum of Far Eastern Antiquities. K 12001: 740. *Ibid.*, pl. 27: 8. Author's photograph.

Figure 111 Side of an amphora. Museum of Far Eastern Antiquities. K 11241: 3. *Ibid.*, pl. 45: 12. Author's photograph.

Plate 43 Ma-chia-yao Style Five

Figure 112 Part of a bowl. Museum of Far Eastern Antiquities. K 12001: 584. *Ibid.*, pl. 41: 10. Author's photograph.

Figure 113 Part of a bowl. Museum of Far Eastern Antiquities. K 12001: 1115. *Ibid.*, pl. 10: 9. Author's photograph.

Figure 114 Outside of Figure 113. Author's photograph.

Plate 44 Ma-chia-yao Style Five

Figure 115 Bowl. Museum of Far Eastern Antiquities. K 6593. *Ibid.*, pl. 24: 2.

Figure 116 Tall jar from Lin-hsia-hsien, Kansu. Akiyama Terukazu et al., *Arts of China*, vol 1, *Neolithic Cultures to the T'ang Dynasty* (Tokyo and Palo Alto, 1968), pl. 4.

Plate 45 Ma-chia-yao Style Five

Figure 117 Rim of an amphora. Museum of Far Eastern Antiquities. MCY K 12001: 1251. Buff ware; black paint on outside. H. 4 cm.; thickness of rim 1.5 cm.

Figure 118 Rim of an amphora. Museum of Far Eastern Antiquities. MCY K 12001: 1245. Sand-colored ware; black paint which has discolored to blue. H. 6 cm. Author's photograph.

Figure 119 Inside of Figure 118. Author's photograph.

Plate 46 Ma-chia-yao Style Five

Figure 120 Vase. Museum of Far Eastern Antiquities. K 5195. Andersson, *BMFEA*, 15 (1943), pl. 56: 1a.

Plate 47 Ma-chia-yao Style Six

Figure 121 Bowl sherd. Museum of Far Eastern Antiquities. K 11241: 19. Sommarström, *BMFEA*, 28 (1956), pl. 14: 7. Author's photograph.

Figure 122 Bowl sherd (outer surface). Museum of Far Eastern Antiquities. K 12001: 584. *Ibid.*, pl. 17: 5. Author's photograph.

Figure 123 Fragments of an amphora. Museum of Far Eastern Antiquities. K 12001: 1505. *Ibid.*, pl. 14: 1.

Figure 124 Upper part of a jar. Museum of Far Eastern Antiquities. K 11999: 23. *Ibid.*, pl. 17: 15.

Plate 48 Ma-chia-yao Style Six

Figure 125 Bowl. Museum of Far Eastern Antiquities. K 5481. Andersson, *BMFEA*, 15 (1943), pl. 55: 3 a-b.

Figure 126 Jar excavated from T'ung-wei Li-chia-p'o. After *Kansu ts'ai-t'ao*, no. 7.

Figure 127 Vase excavated from T'ung-wei Pi-yü. After *Kansu ts'ai-t'ao* no 15.

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Figure 128 Bowl excavated from Lanchou Ts'ao-chia-tsui. *KK* (1973/3), 149, fig. 5.

Plate 50 Wei River Style Ware from Ma-chia-yao

Figure 129 Neck belonging to the amphora Figure 130. Museum of Far Eastern Antiquities. MCY K 11999: 456. Red ware; bluish-black paint. H. 10 cm. Author's photograph.

Figure 130 Fragmentary body of an amphora. Museum of Far Eastern Antiquities. K 11999: 124. Sommarström, *BMFEA*, 28 (1956), pl. 45: 8. Author's photograph.

Figure 131 Drawing of an amphora from Kansu (site unspecified). Ma Ch'eng-yüan, *Yang-shao wen-hua ti ts'ai-t'ao* p. 81, fig. 72. Vessel said to be in the Shanghai Museum.

Figure 132 Sherd from upper part of an amphora. Museum of Far Eastern Antiquities. MCY K 11999: 722. Pinkish ware covered with white slip; black paint. H. 10 cm. Author's photograph.

Plate 51 Wei River Style Ware from the Wei River area

Figure 133 Jar excavated from Kan-ku Wang-chia-p'ing. After *Kansu ts'ai-t'ao*, no. 11.

Figure 134 Jar excavated from the T'ien-shui area. After *Kansu ts'ai-t'ao*, no. 12.

Figure 135 Jar excavated from Ch'in-an Shan-wang-chia. After *Kansu ts'ai-t'ao*, no. 8.

Plate 52 Wei River Style Ware from Ma-chia-yao

Figure 136 Bowl sherd. Museum of Far Eastern Antiquities. K 11241: 13. Sommarström, *BMFEA*, 28 (1956), pl. 17: 7. Author's photograph.

Figure 137 Bowl sherd. Museum of Far Eastern Antiquities. K 11241: 8. *Ibid.*, pl. 17: 8. Author's photograph.

Figure 138 Bowl sherd. Museum of Far Eastern Antiquities. K 11999: 556. *Ibid.*, pl. 17: 14. Author's photograph.

Figure 139 Bowl sherd. Museum of Far Eastern Antiquities. K 12001: 358. *Ibid.*, pl. 17: 13. Author's photograph.

Figure 140 Bowl sherd. Museum of Far Eastern Antiquities. K 11999: 598. *Ibid.*, pl. 28: 14.

Plate 53 Wei River Style Ware from the Wei River Area

Figure 141 Necks of small vessels. Museum of Far Eastern Antiquities. MCY: K 11998: 228 (left), others marked "MCY." Red ware. H. ca. 6 cm. Author's photograph.

Figure 142 Tall water vessel from Kan-ku, Kansu. After *The Chinese Exhibition*, no. 36.

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Plate 54 Fragmentary vessels from the Wei River Area.

Figure 144 Neck of a small amphora or jar from the Kan-ku/T'ien-shui area. *KKTH* (1958/5), pl. 1: 3.

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Figure 146 Drawing of Figure 145. *KKTH* (1958/7), 8, fig. 2: 1.

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Figure 147 Small amphora from Wu-shan Hui-ti-erh. *KK* (1961/7), pl. 6: 9.

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Plate 57 Pan-p'o

Figure 149 The evolution of the fish design. *Ibid.*, p. 184.

Plate 58 Pan-p'o Early Style

Figure 150 Bowl. *Ibid.*, pl. II: 2 and pl. CXI: 3.

Figure 151 Bowl. *Ibid.*, pl. CXI: 2.

Figure 152 *Hu*. *Ibid.*, pl. CXXVI: 4.

Figure 153 *Hu*. *Ibid.*, pl. CXXVI: 3.

Plate 59 Pan-p'o Middle Style

Figure 154 *P'en*. *Ibid.*, pl. CXIV

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Figure 156 *P'en*. *Hsi-an Pan-p'o*, pl. CX: 1.

Figure 157 *P'en*. *Ibid.*, pl. CXI: 1.

Figure 158 *P'en*. *Ibid.*, pl. CXII: 3.

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Plate 62 Miao-ti-kou

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Plate 63 Miao-ti-kou

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Plate 64 Miao-ti-kou

Figure 162 *P'en*. An Chih-min et al., *Miao-ti-kou yü San-li-ch'iao* (Peking, 1959), pl. XXVII: 1.

Figure 163 *P'en*. *Ibid.*, pl. XXI: 4.

Plate 65 Miao-ti-kou

Figure 164 *P'en*. *Ibid.*, pl. XXIV: 1.

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Figure 166 *P'en*. *Ibid.*, pl. XXIII: 3.

Plate 66 Miao-ti-kou

Figure 167 *P'en*. *Ibid.*, pl. XXVI: 1.

Plate 67 Miao-ti-kou

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Figure 169 *P'en*. *Miao-ti-kou yü San-li-ch'iao*, pl. XXV: 3.

Plate 68 Miao-ti-kou

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Figure 186 *Kuan*. *Ibid.*, pl. 3: 4.

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(b) *Pei* from Ning-yang Ta-wen-k'ou. *Ta-wen-k'ou*, pl. 105: 6.

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Figure 232 *Kuei*. *Ibid.*, pl. 7: 3.

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Figure 245 Mortar. *Ibid.*, pl. 1: 12.

Figure 246 Incised sherd. *Ibid.*, pl. 3: 10.

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Figure 249 *Kuan* from Anyang, *HPKM* 1380. Li Chi, *Hsiao-t'un*, *Archaeologia Sinica* No. 2, Vol. III: Artifacts (Taipei, 1956), pl. XV, upper.

Figure 250 *Kuan* from Li-hsien, Ch'eng-tzu-yai. Fu Ssu-nien, Li Chi et al., *Ch'eng-tzu-yai* (Nanking, 1934), pl. XXVII

PLATES

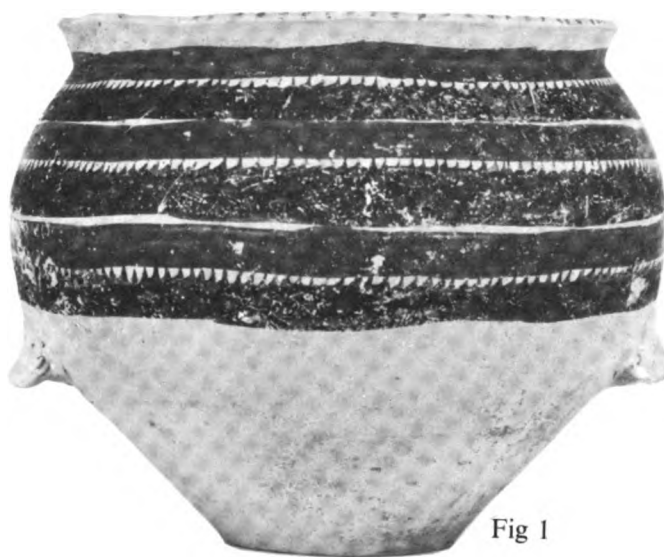


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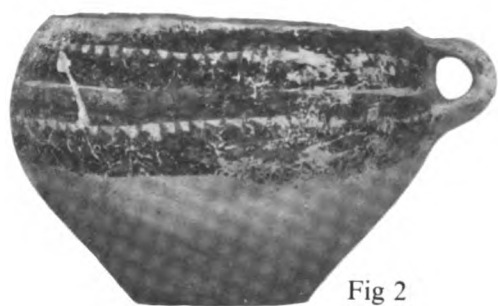


Fig 2



Fig 3

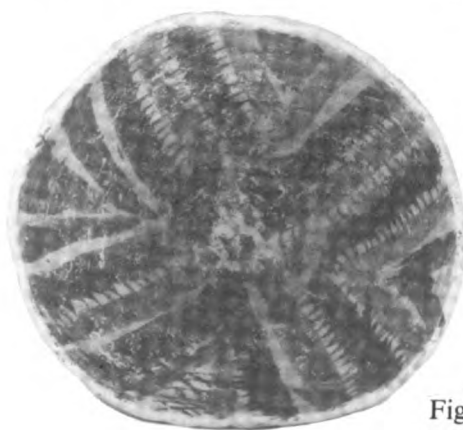


Fig 4

Plate 2



Fig 5



Fig 6



Fig 7



Fig 8



Fig 9



Fig 10

Plate 4



Fig 11



Fig 12



Fig 13

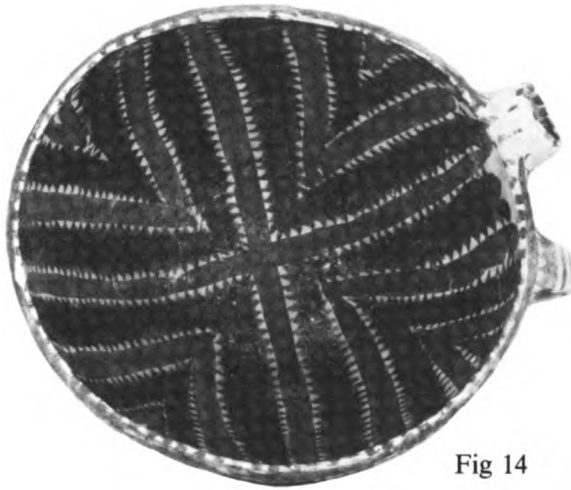


Fig 14



Fig 15

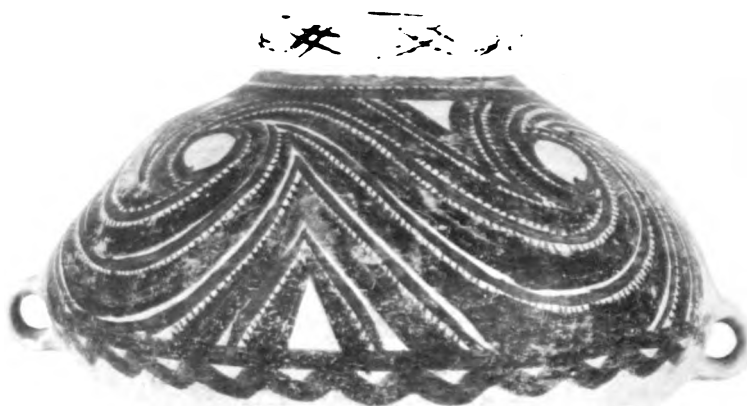


Fig 16



Fig 17



Fig 18



Fig 19

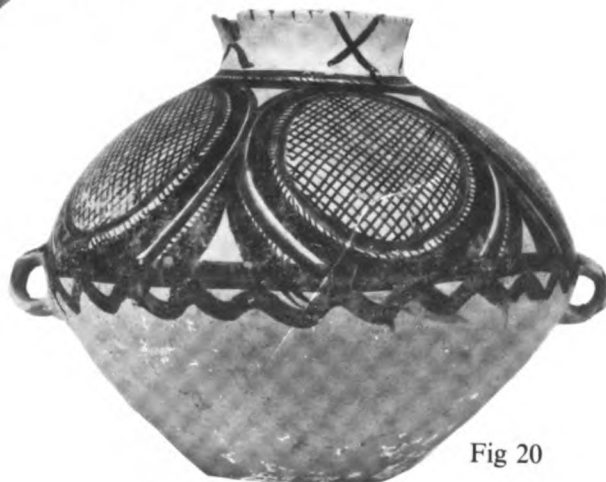


Fig 20



Fig 21



Fig 22



Fig 24



Fig 23



Fig 25

Plate 10



Fig 26



Fig 27



Fig 28





Fig 31



Fig 32



Fig 33



Fig 34



Fig 35



Fig 36



Fig 37



Fig 38



Fig 39



Fig 40



Fig 41



Fig 42



Fig 43



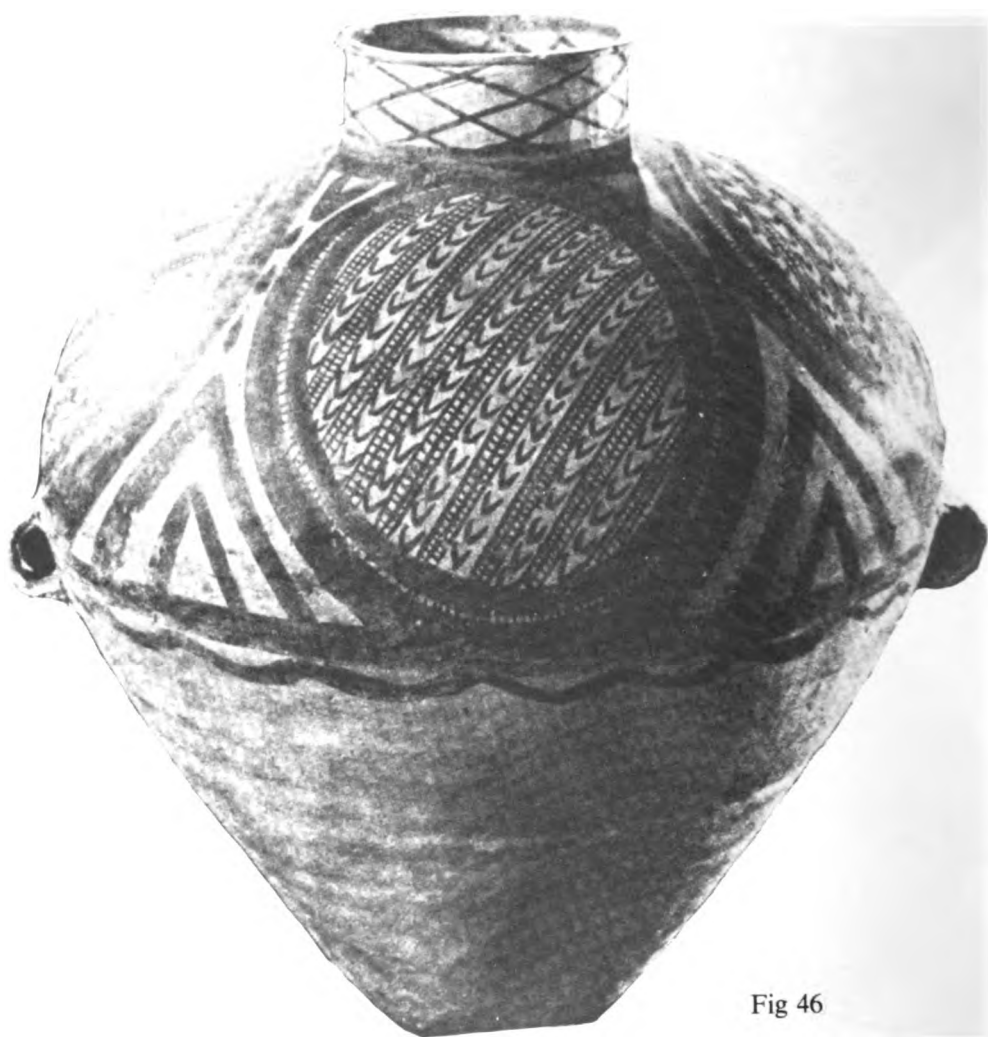


Fig 46



Fig 47



Fig 48



Fig 49



Fig 50



Fig 51



Fig 52

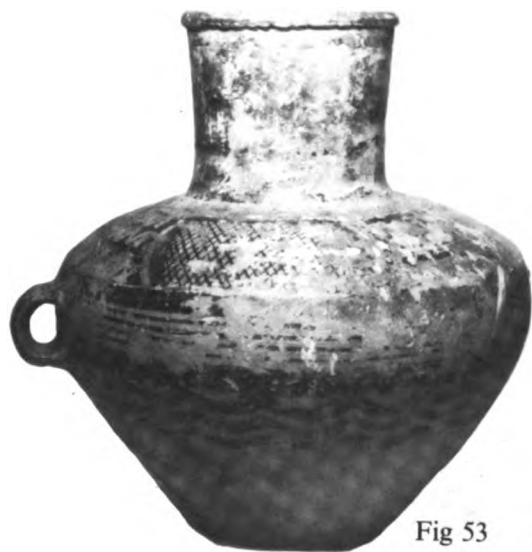


Fig 53



Fig 54



Fig 55



Fig 56

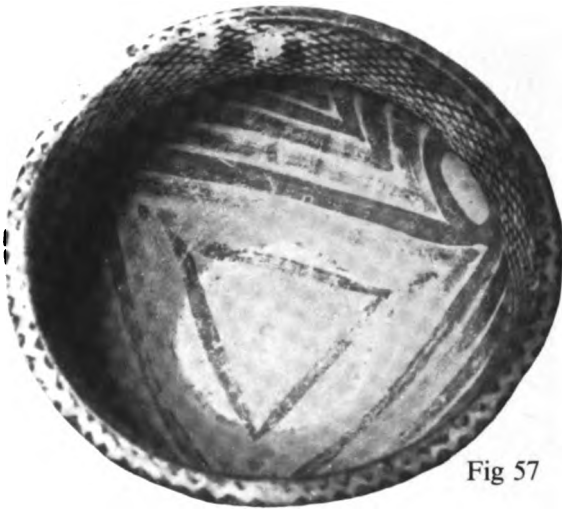


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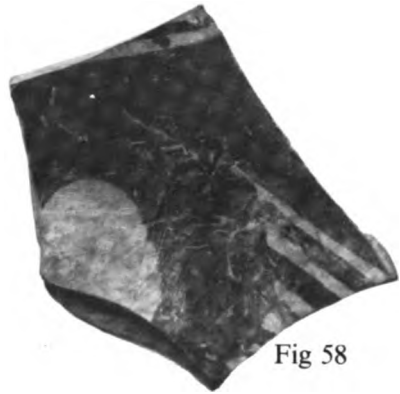


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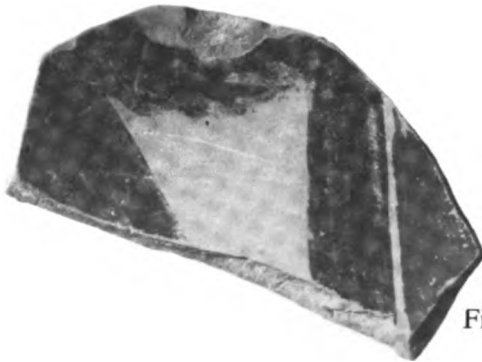


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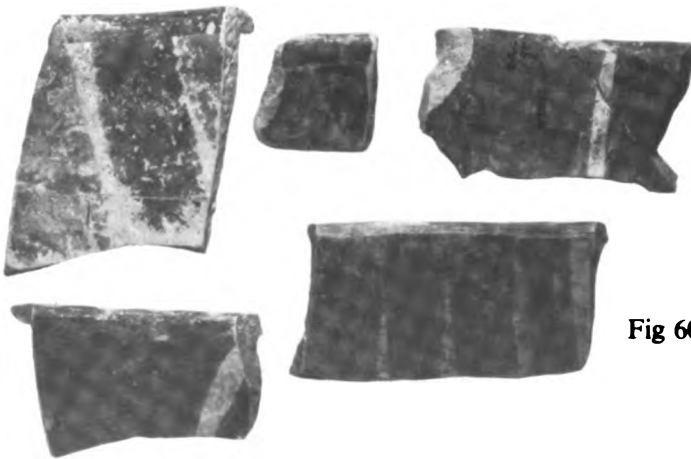


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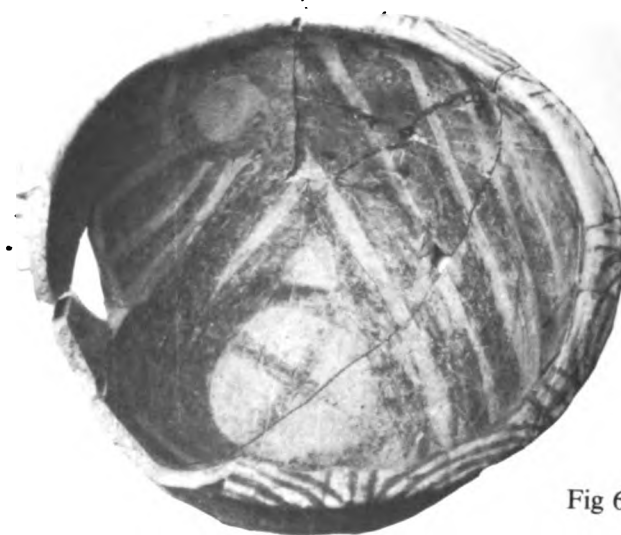


Fig 61



Fig 62



Fig 63



Fig 64



Fig 65

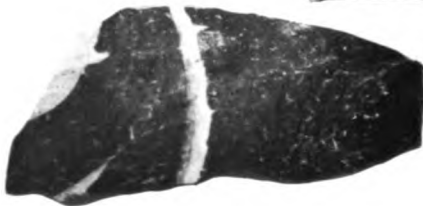


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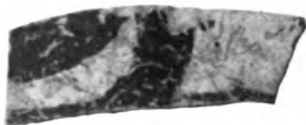
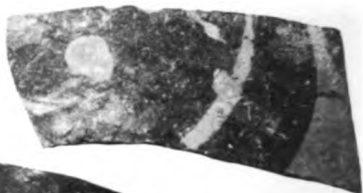


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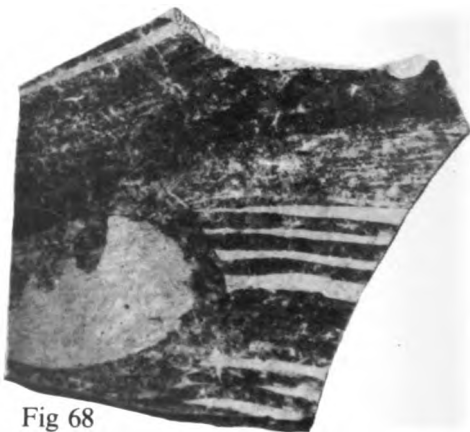


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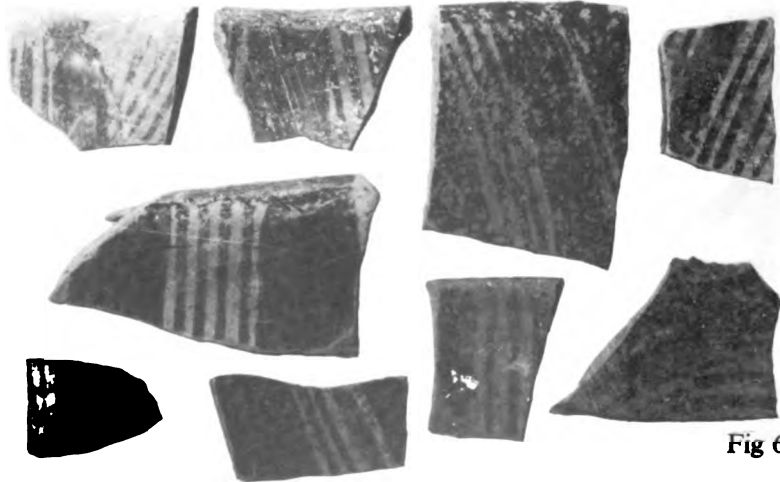


Fig 69



Fig 70



Fig 71



Fig 72

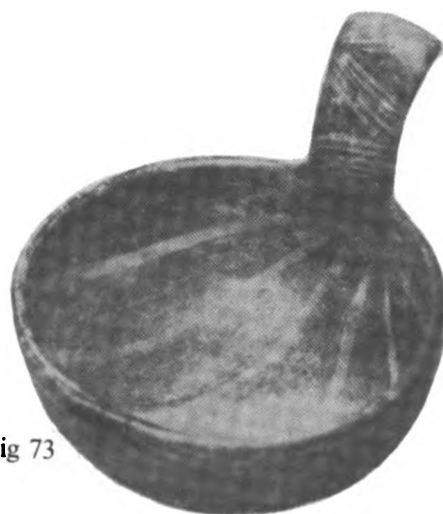


Fig 73



Fig 74

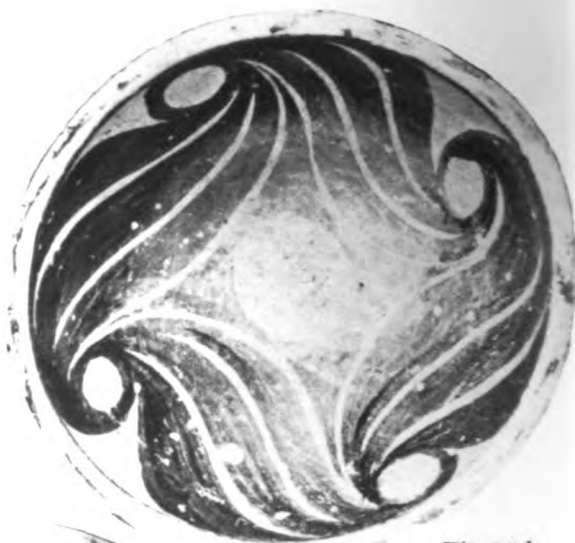


Fig 75 b



Fig 75 a



Fig 76



Fig 77

Plate 30

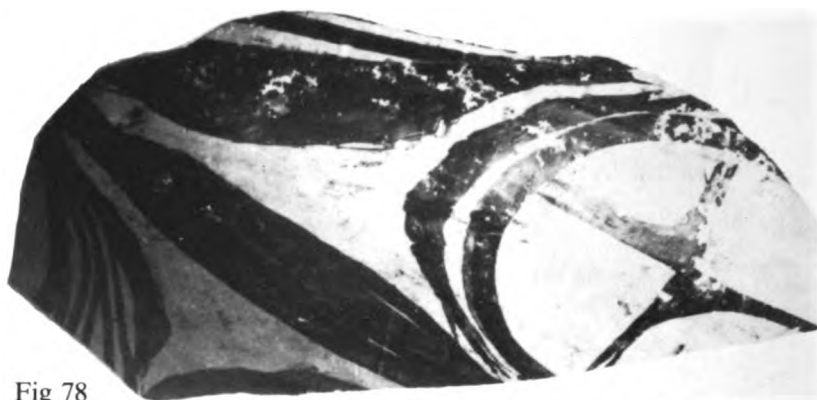


Fig 78



Fig 79

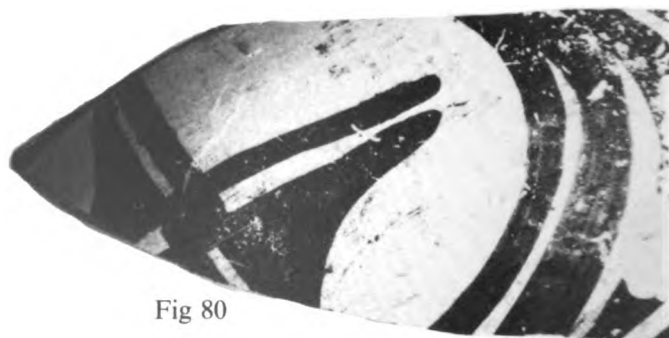


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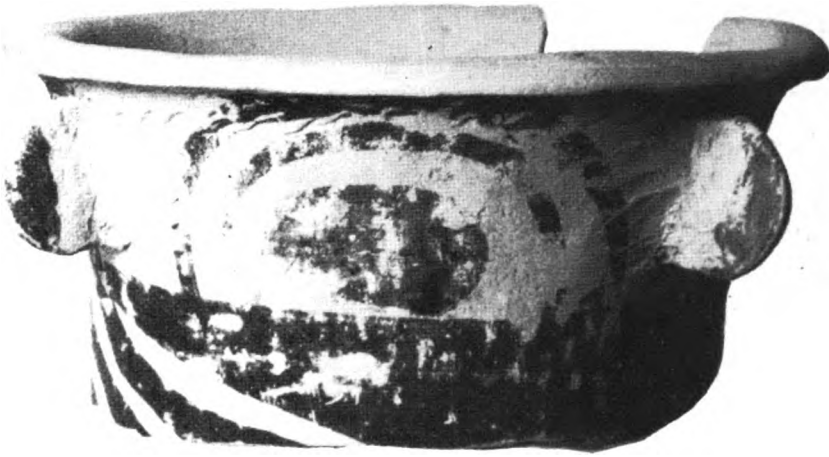


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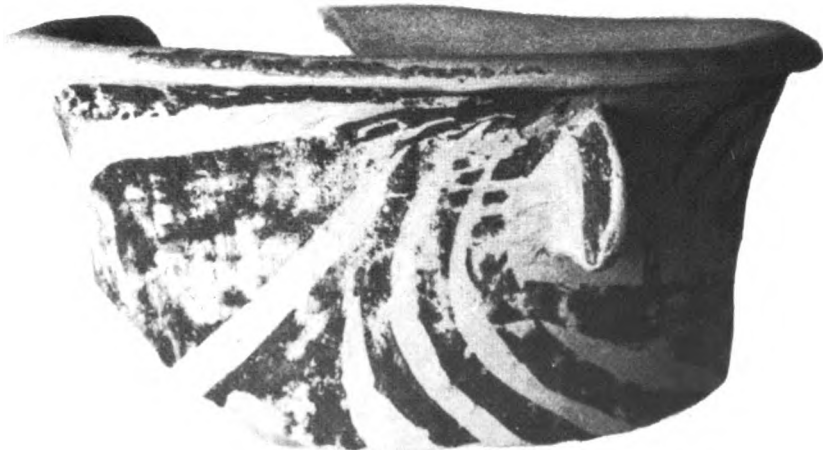
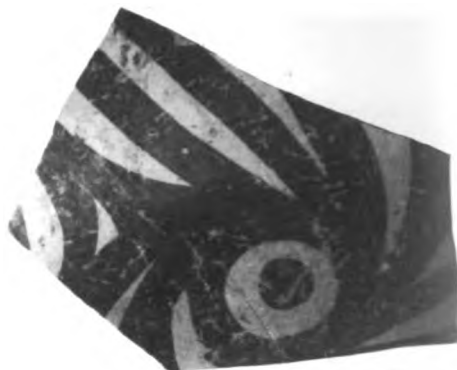


Fig 82

Plate 32



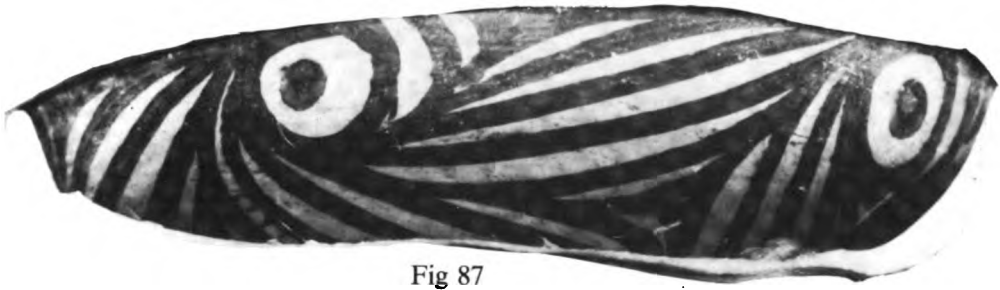


Fig 87



Fig 88



Fig 89

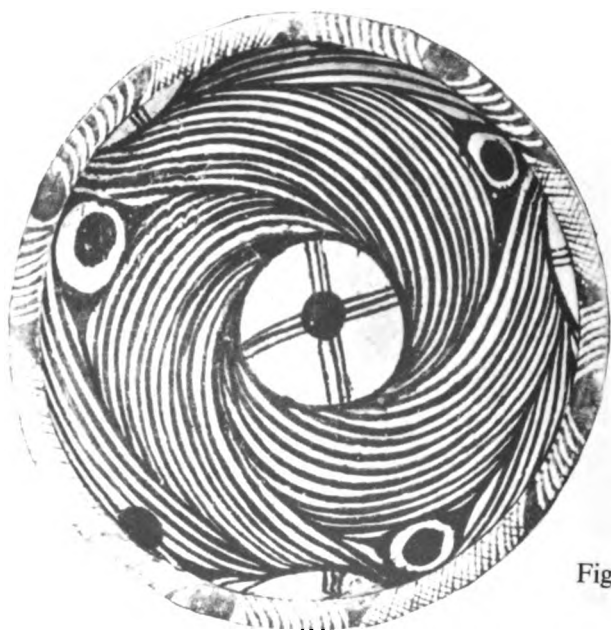


Fig 90



Fig 91



Fig 92



Fig 93



Fig 94

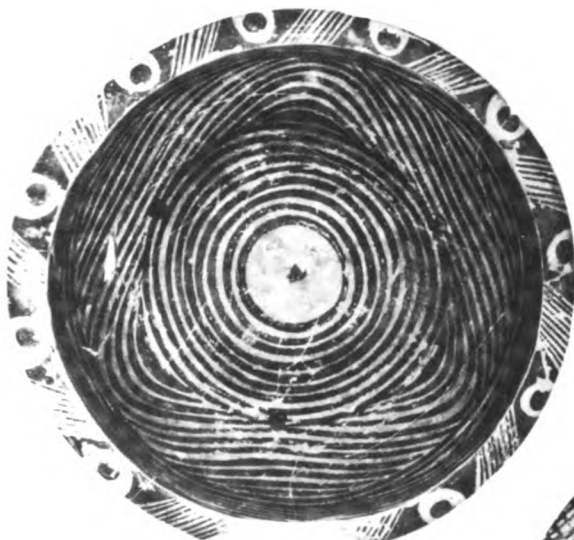


Fig 95

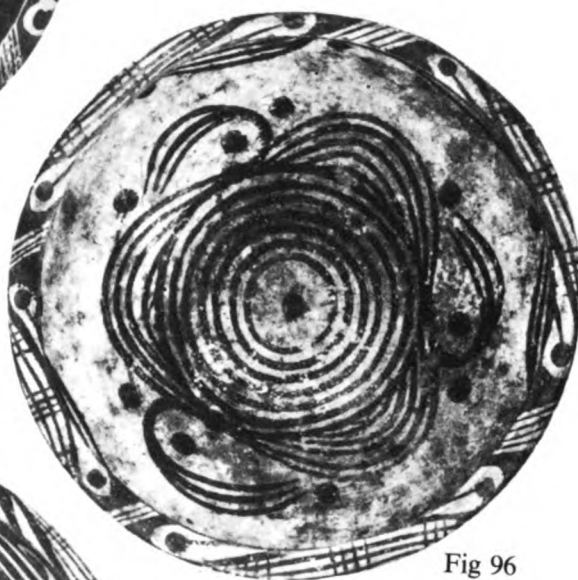


Fig 96

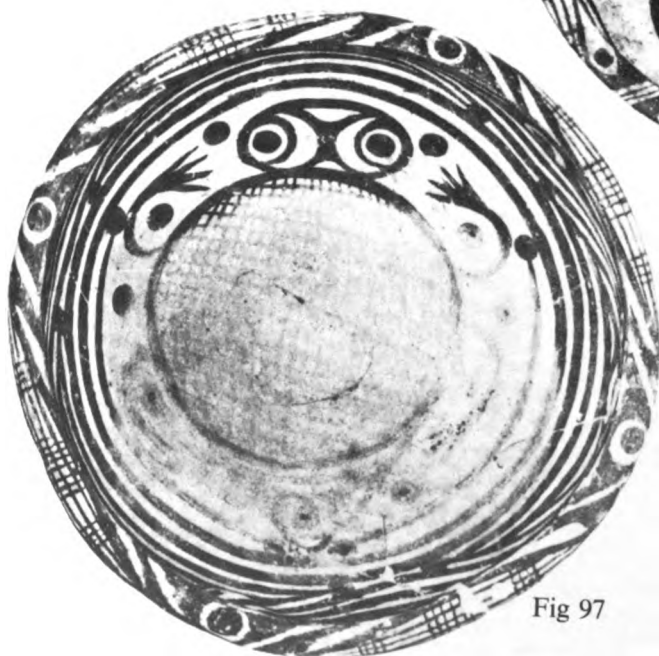


Fig 97



Fig 98



Fig 99

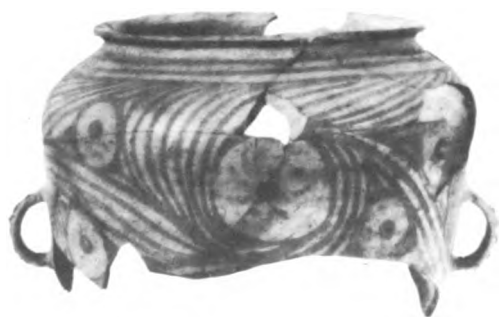


Fig 100

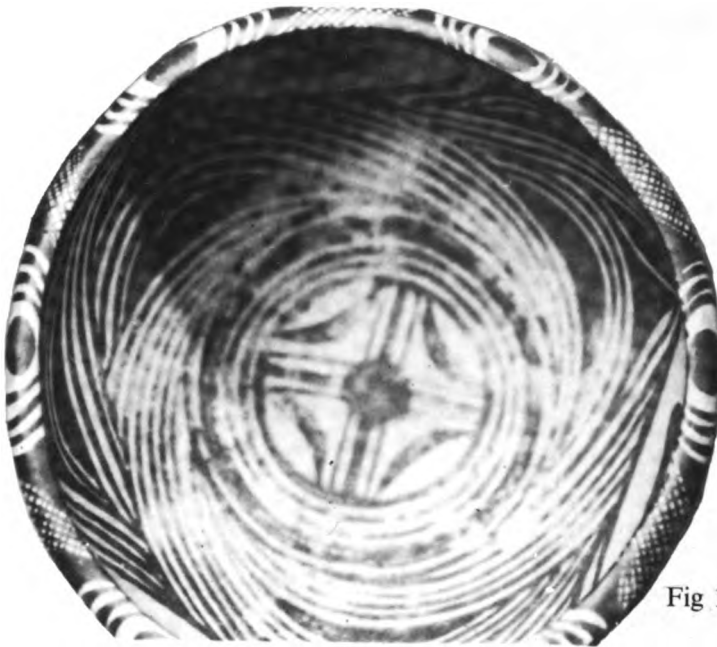


Fig 101



Fig 102



Fig 103

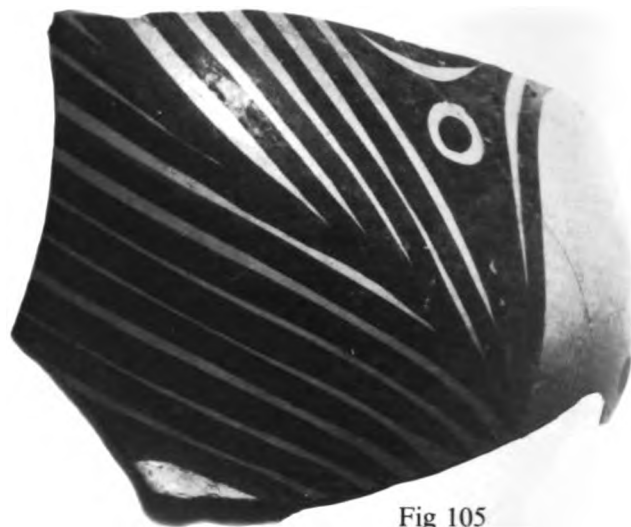


Fig 105



Fig 104

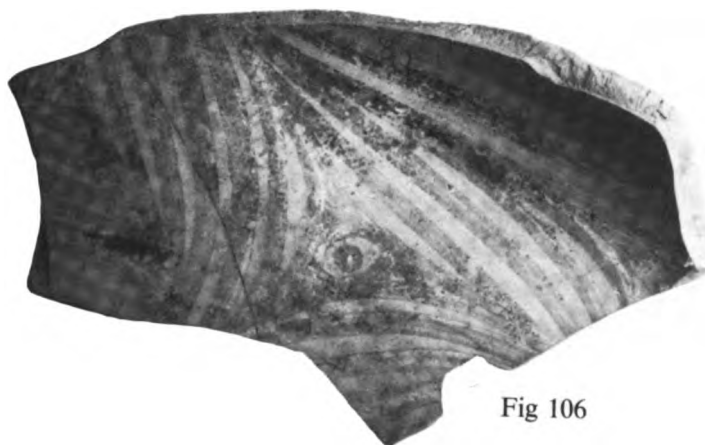


Fig 106



Fig 107



Fig 108

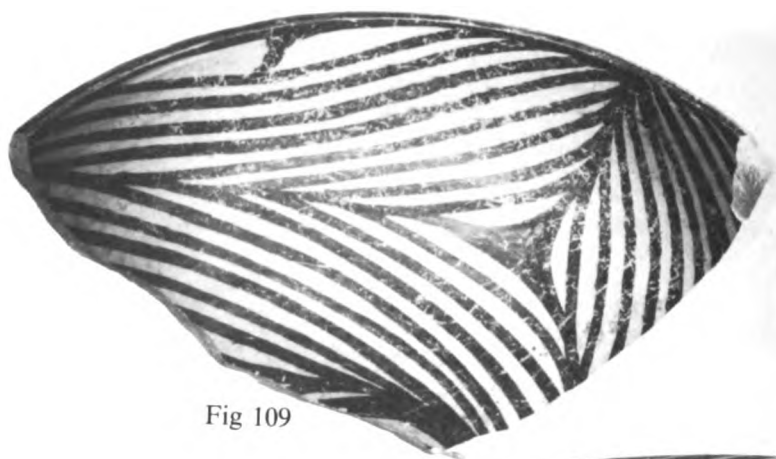


Fig 109



Fig 110

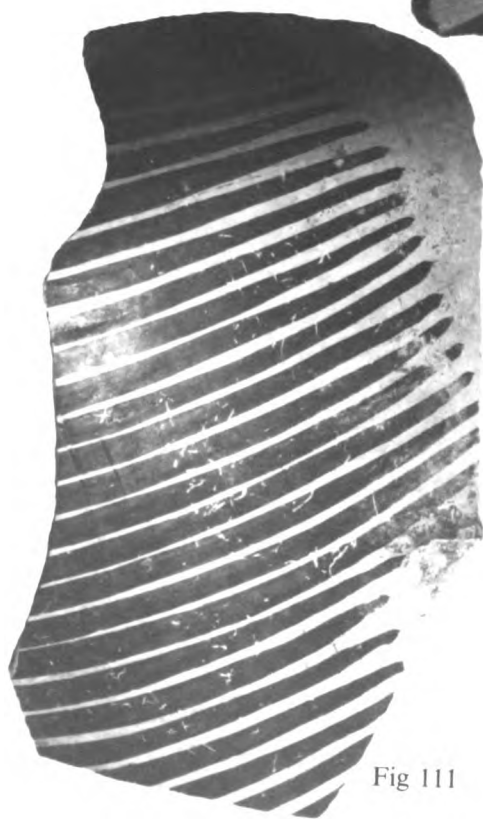


Fig 111

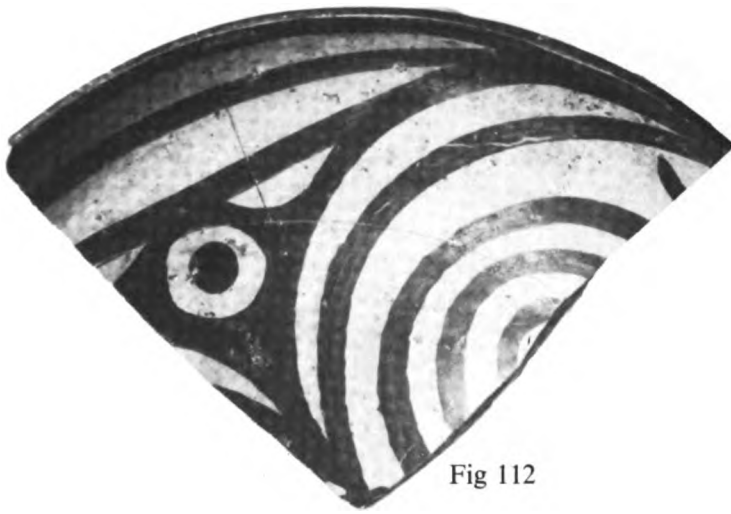


Fig 112

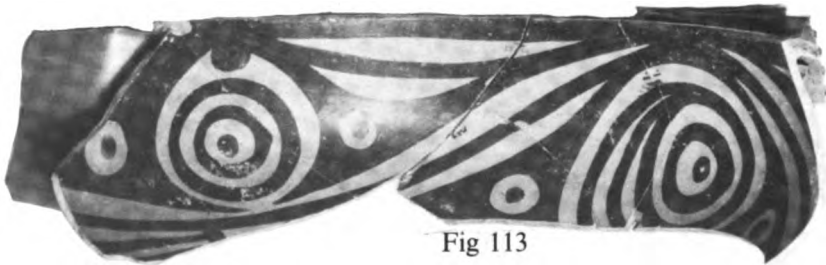


Fig 113



Fig 114



Fig 115



Fig 116



Fig 117



Fig 118

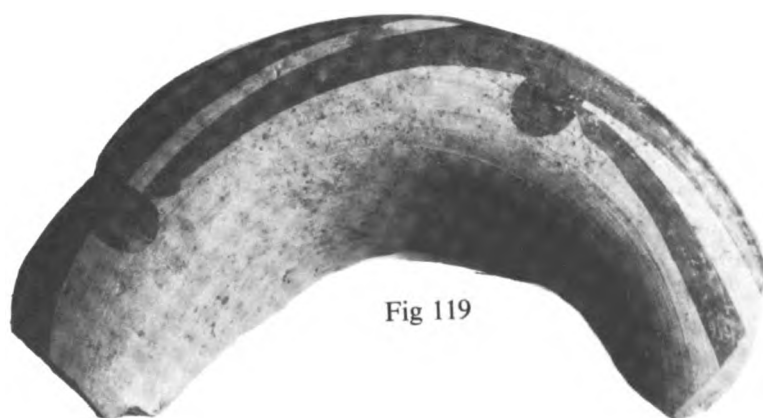


Fig 119



Fig 120



Fig 121

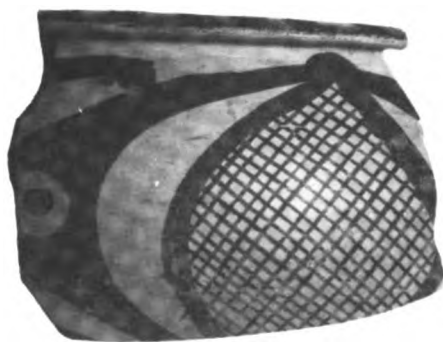


Fig 122



Fig 123



Fig 124

Plate 48

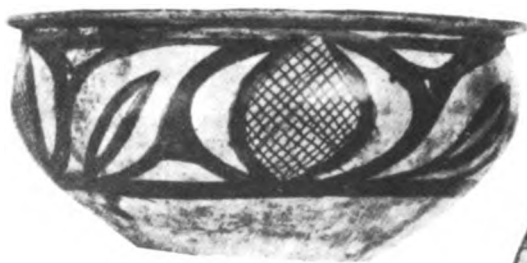


Fig 125



Fig 126



Fig 127



Plate 50

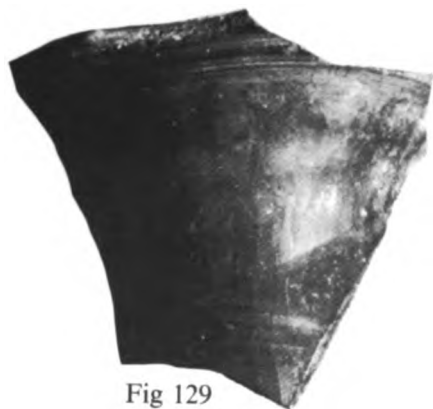


Fig 129

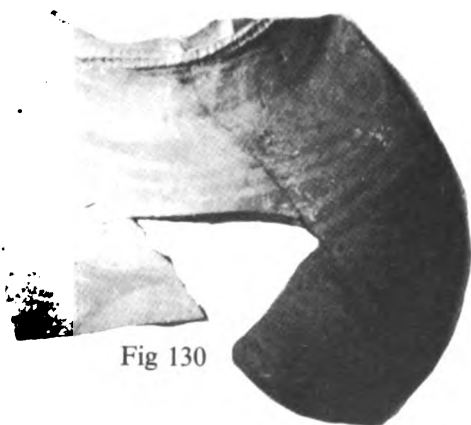


Fig 130



Fig 131

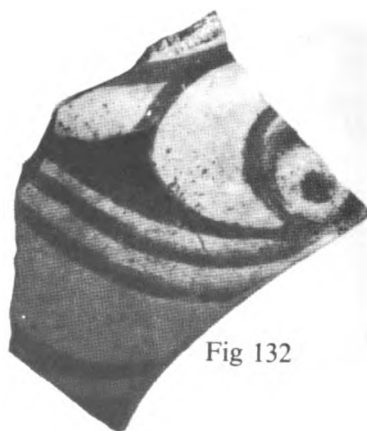


Fig 132



Fig 133



Fig 134



Fig 135

Plate 52



Fig 136

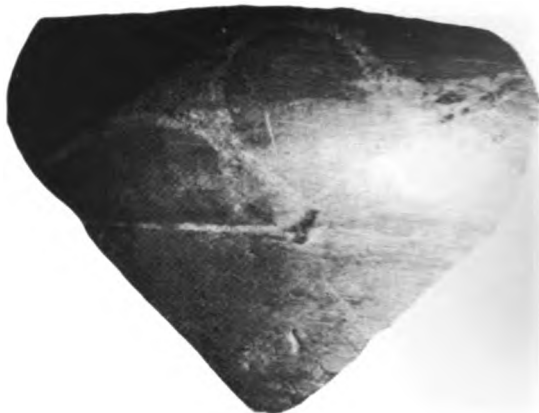


Fig 137



Fig 139

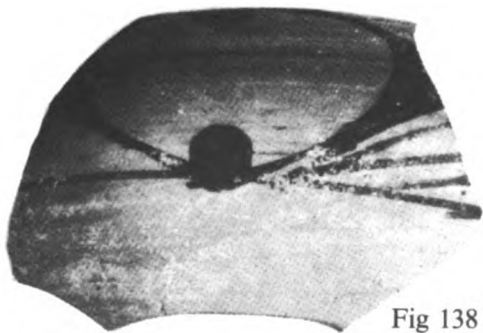


Fig 138

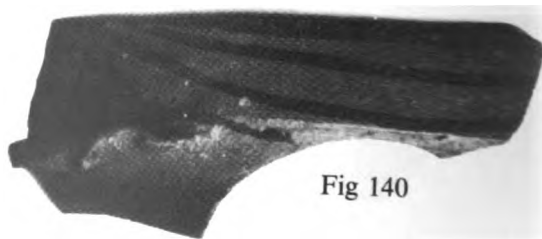


Fig 140

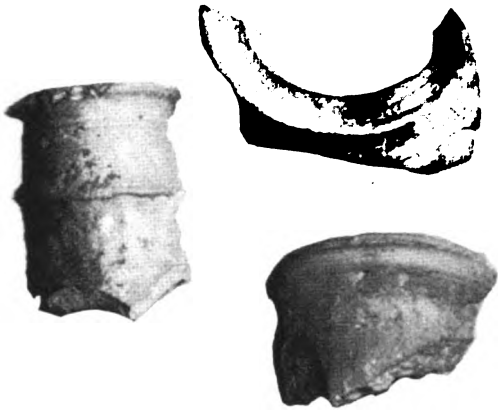


Fig 141



Fig 142



Fig 143





Fig 144

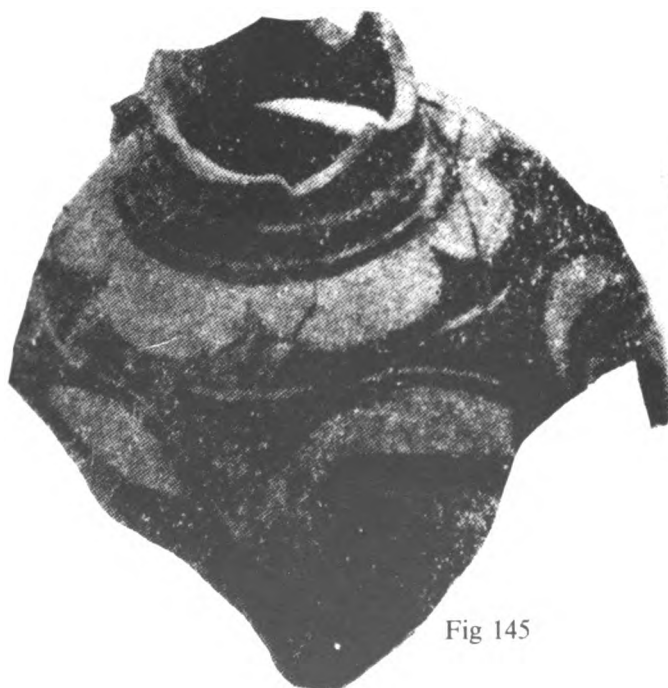


Fig 145



Fig 146

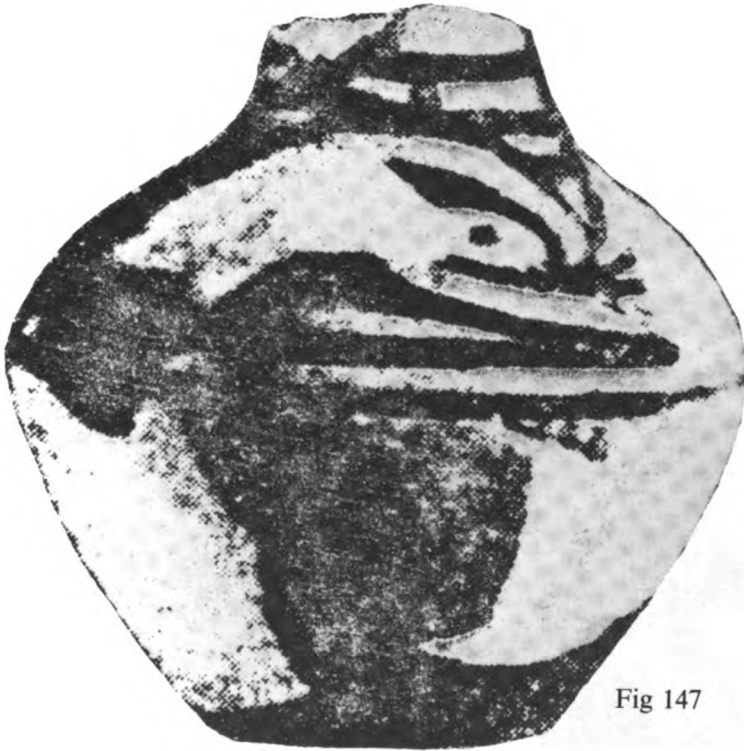


Fig 147

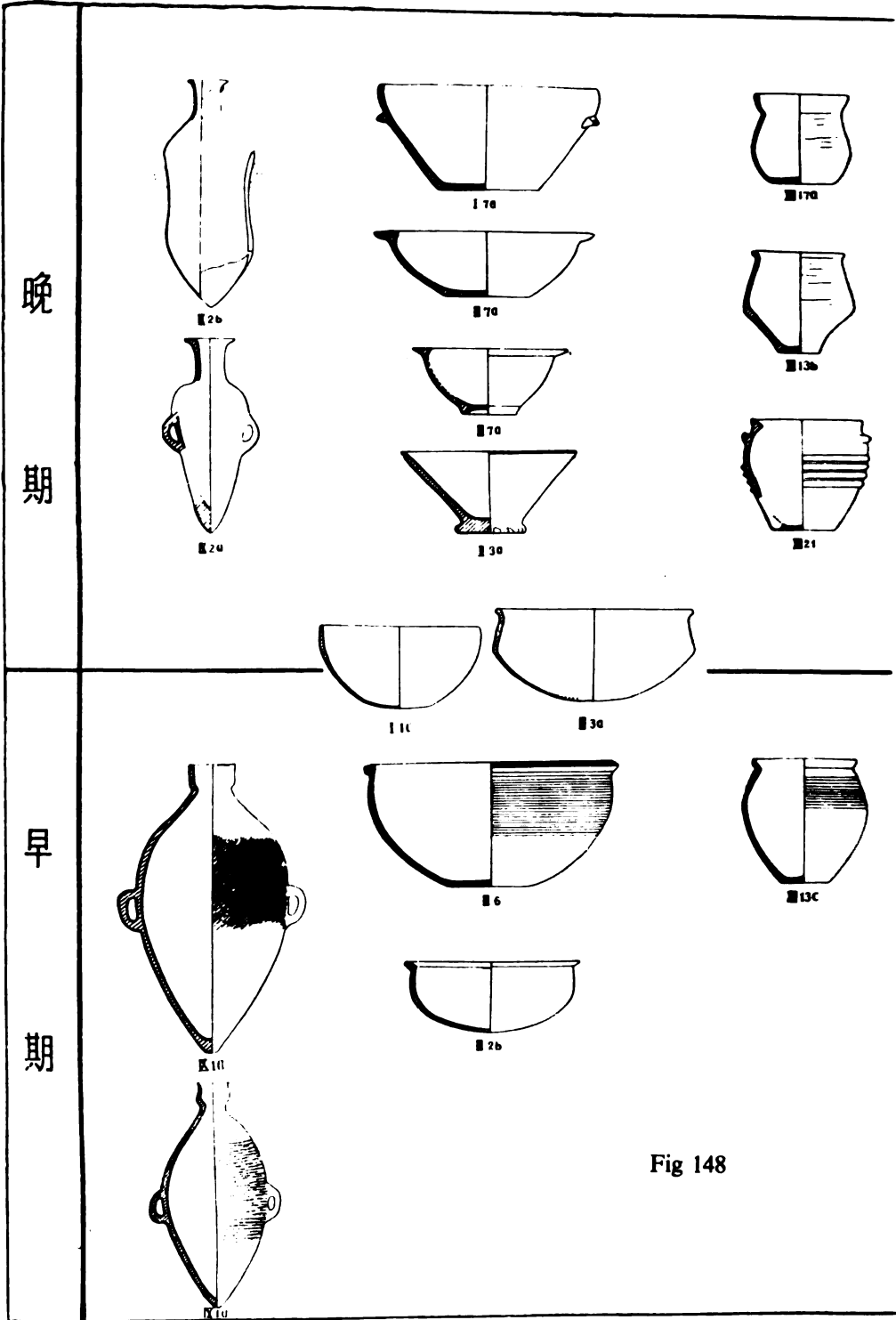


Fig 148

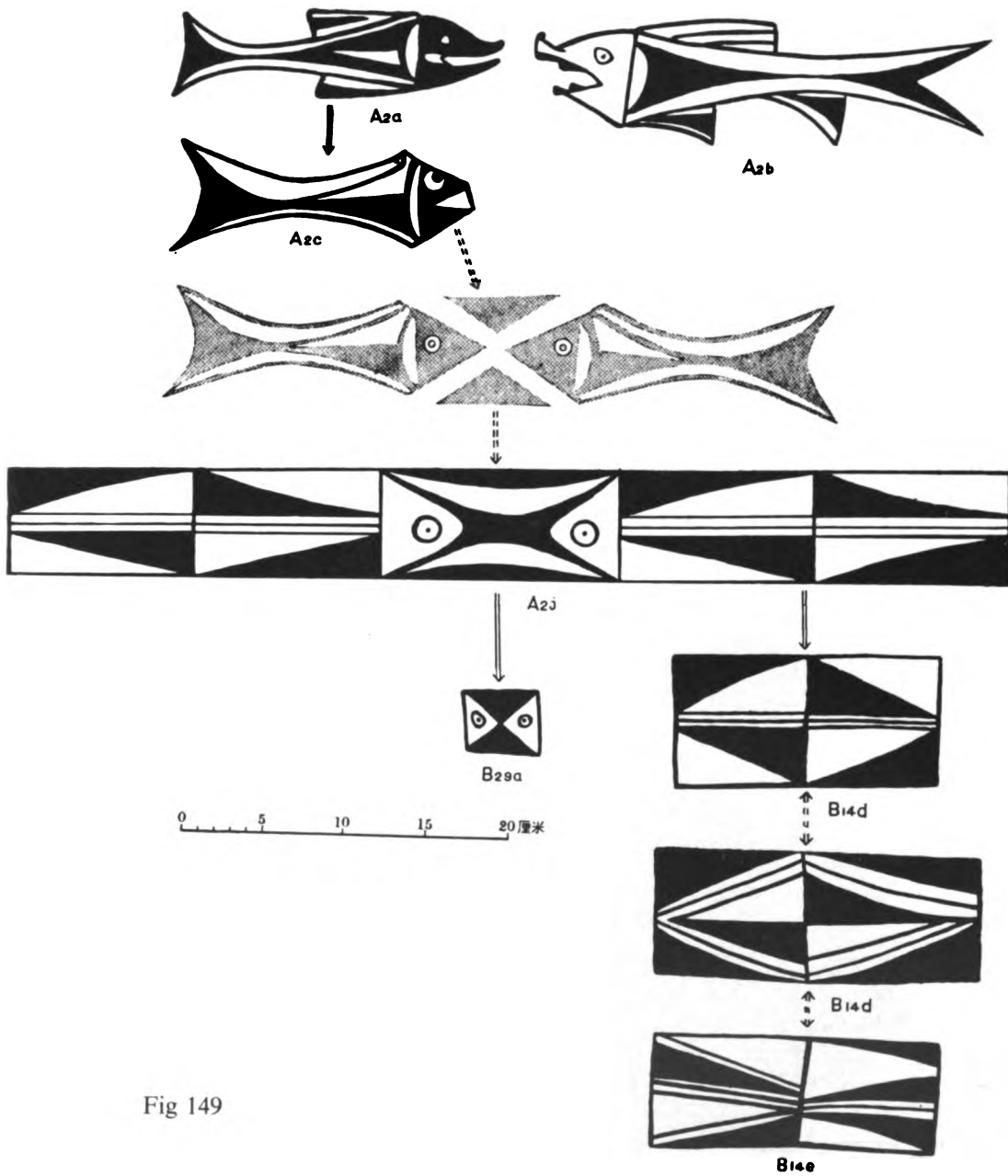


Fig 149



Fig 150



Fig 151



Fig 152



Fig 153

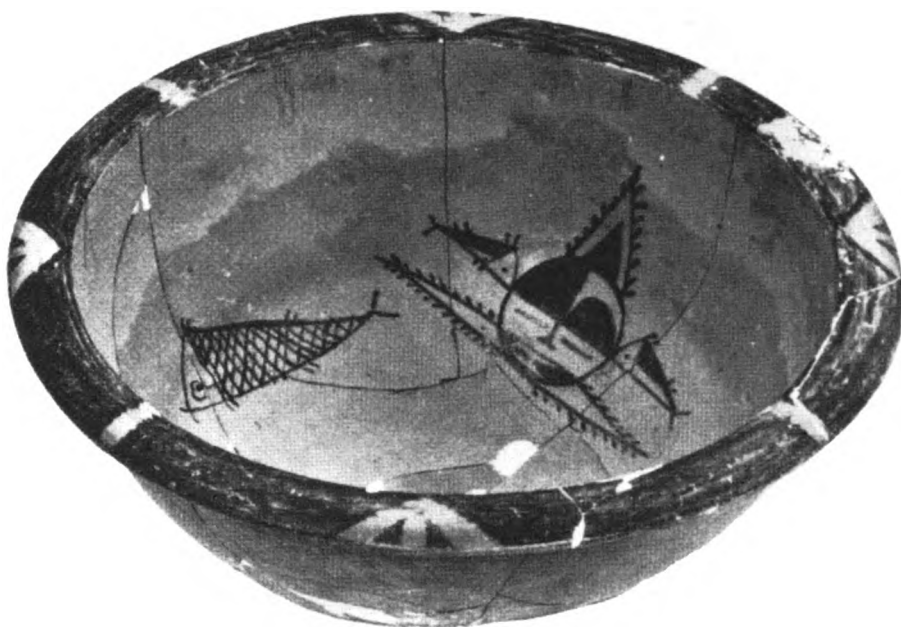


Fig 154



Fig 155

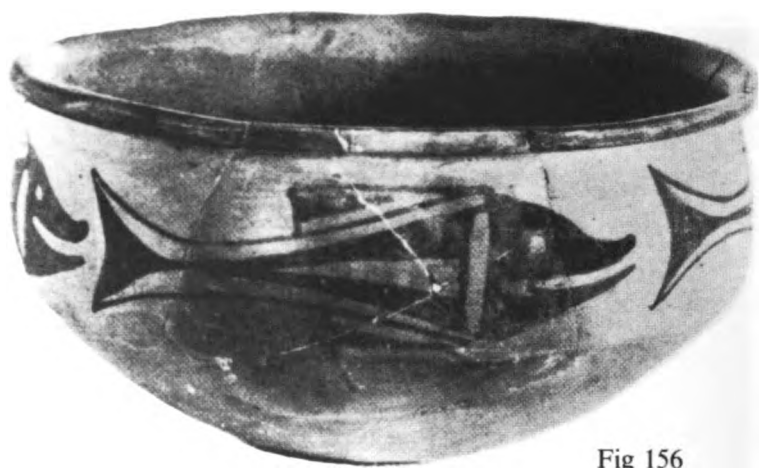


Fig 156

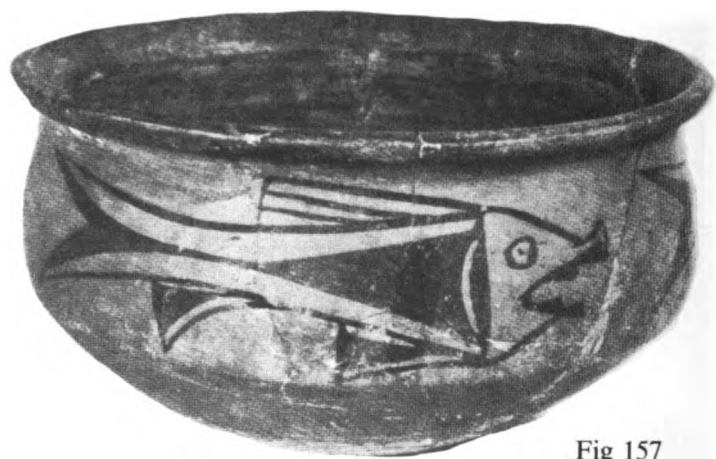


Fig 157

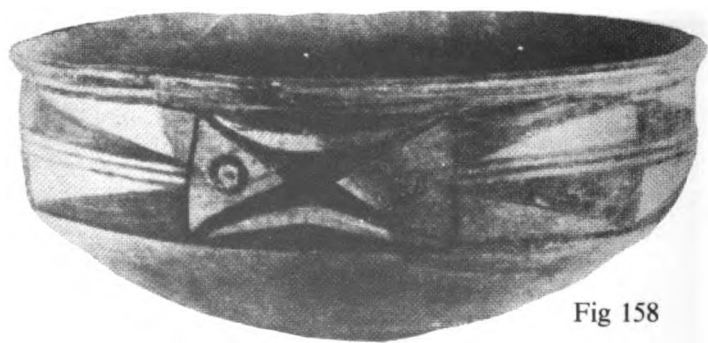


Fig 158

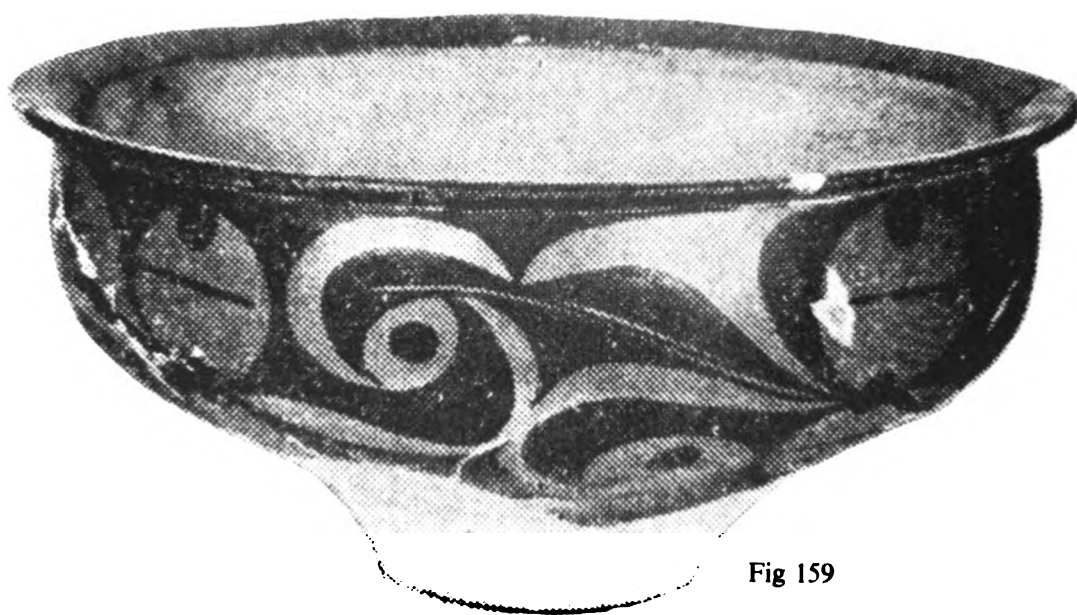
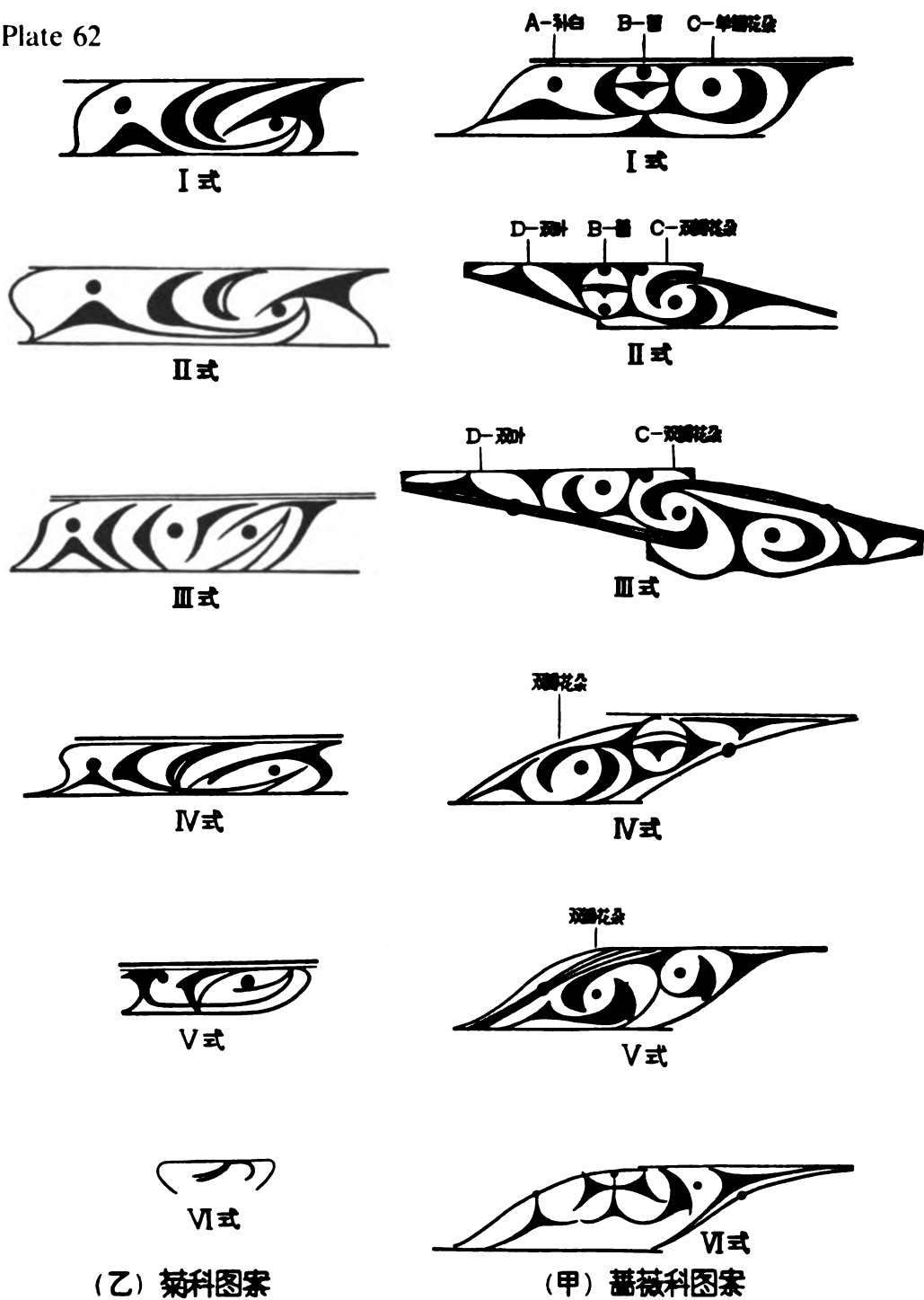
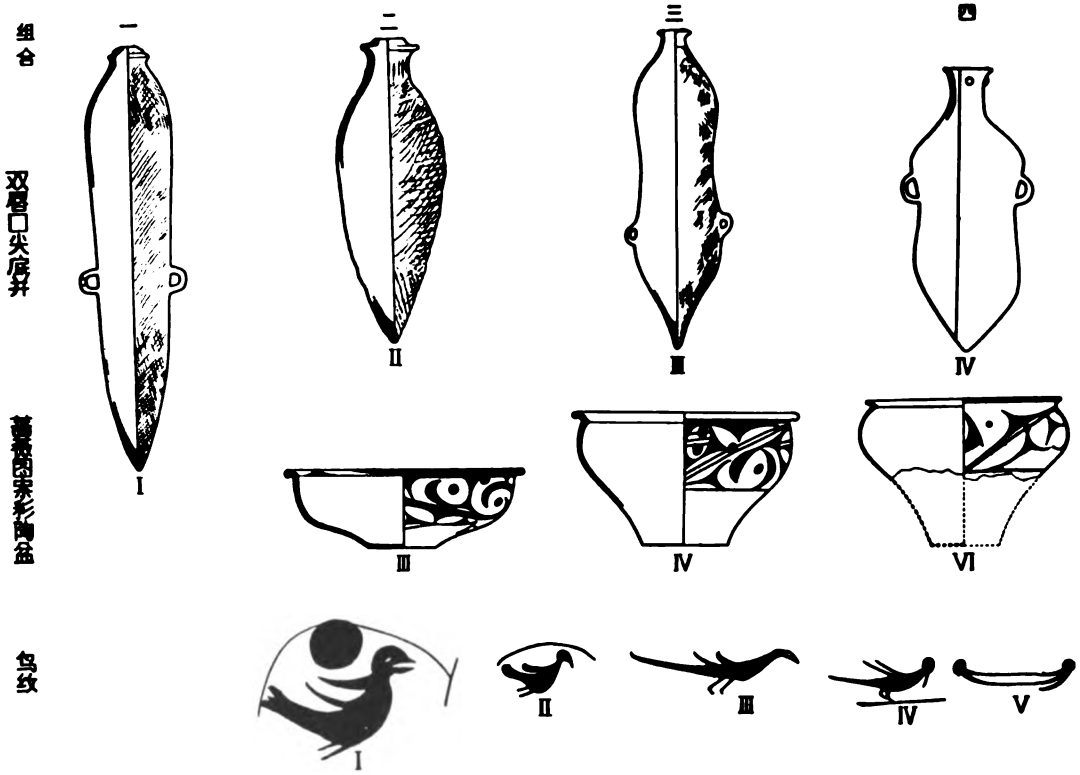


Fig 159



图七 庙底沟类型彩陶植物图案型式序列(标本均华县泉护村出土)



图八 庙底沟类型典型器物型式组合序列

Fig 161



Fig 162



Fig 163



Fig 164



Fig 165

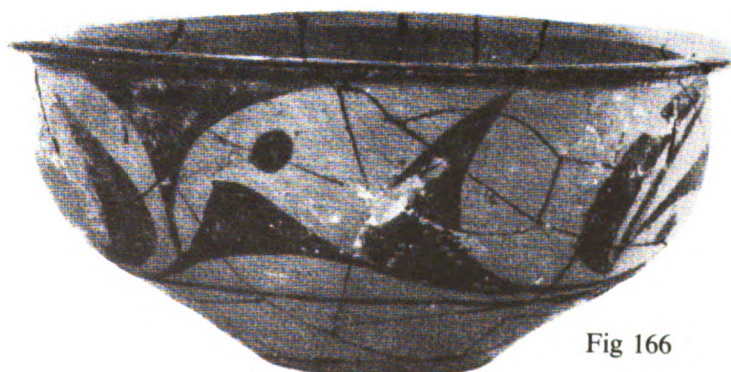


Fig 166



Fig 167

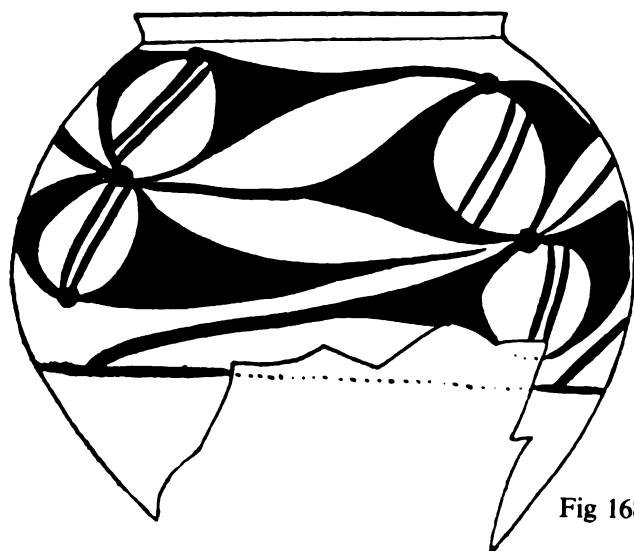


Fig 168

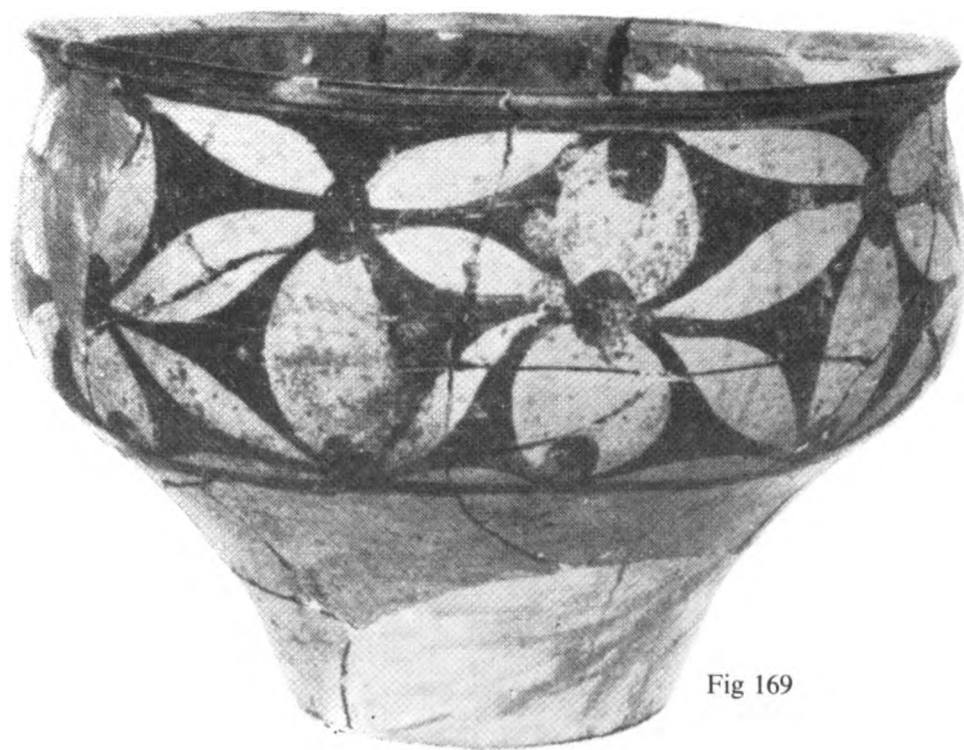


Fig 169

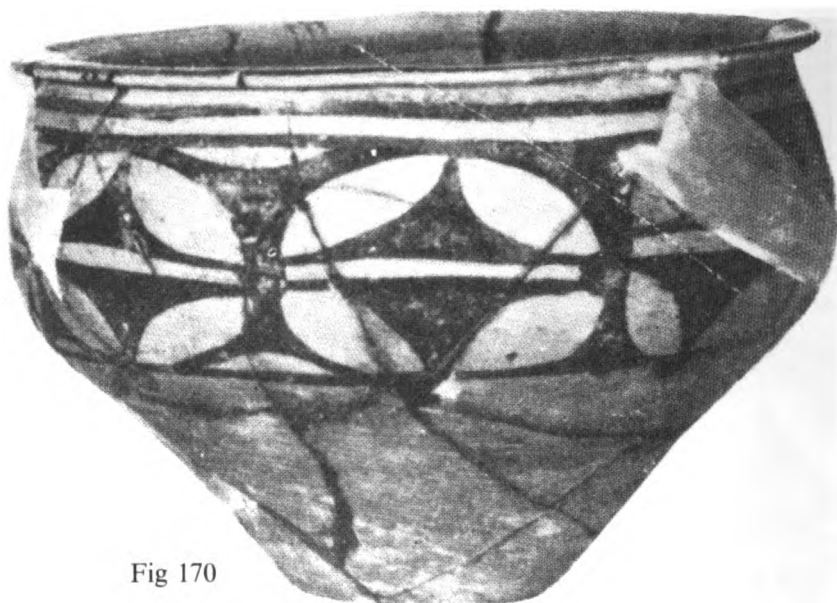


Fig 170



Fig 171

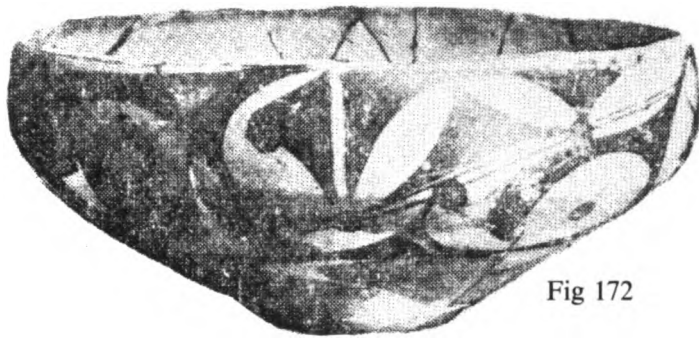


Fig 172

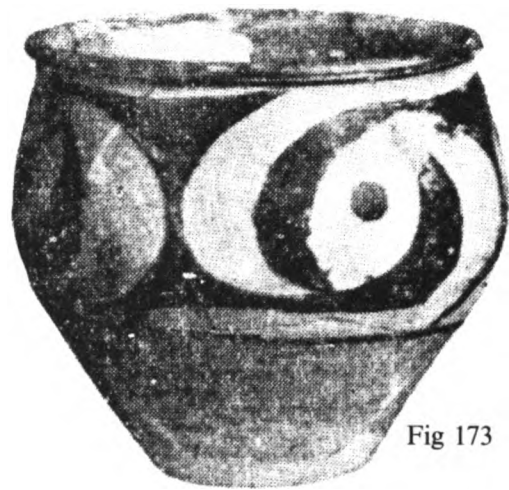


Fig 173

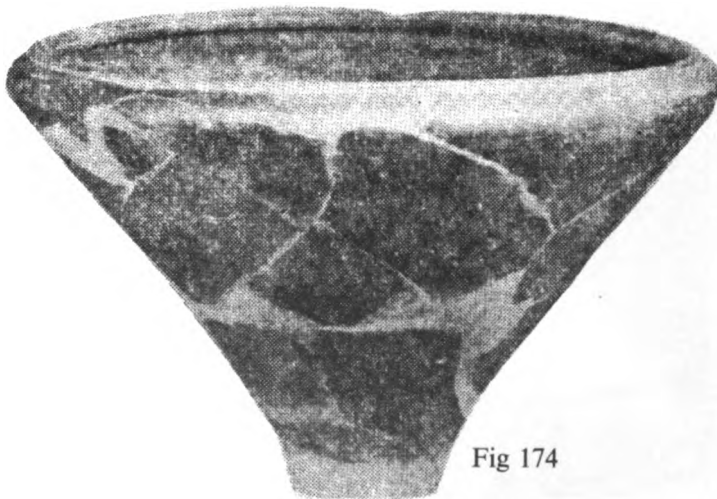


Fig 174

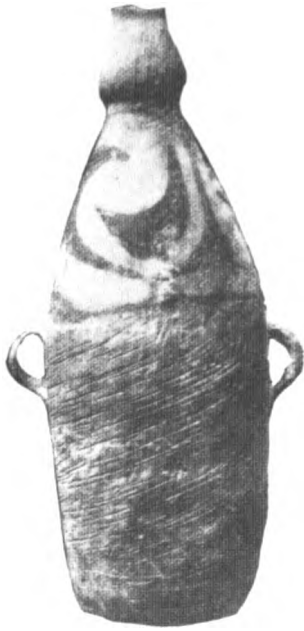


Fig 175



Fig 176



Fig 177



Fig 178

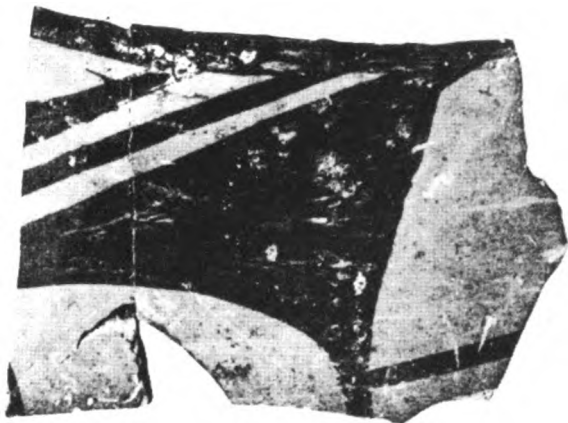


Fig 179

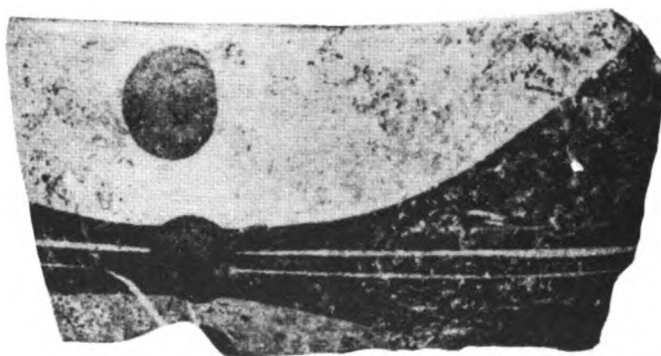


Fig 180



Fig 181



Fig 182

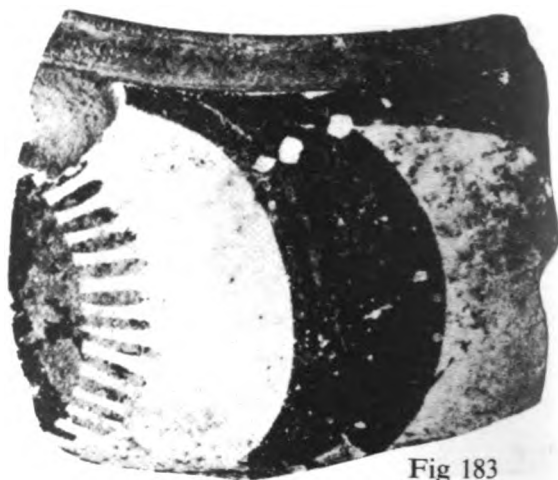


Fig 183

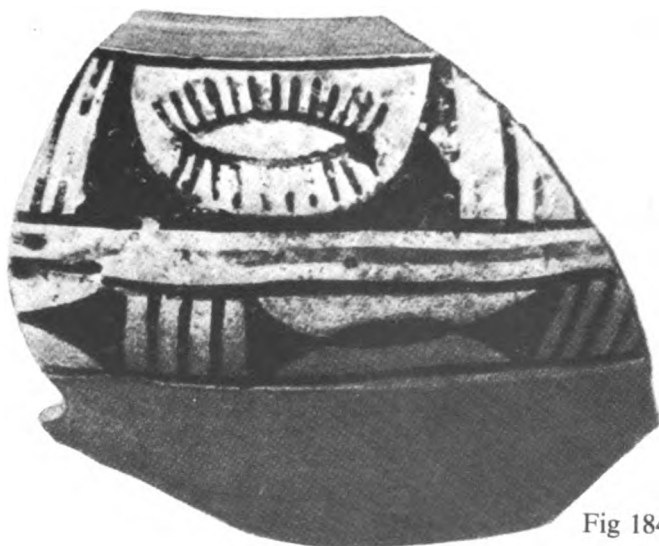


Fig 184



Fig 185



Fig 186



Fig 187

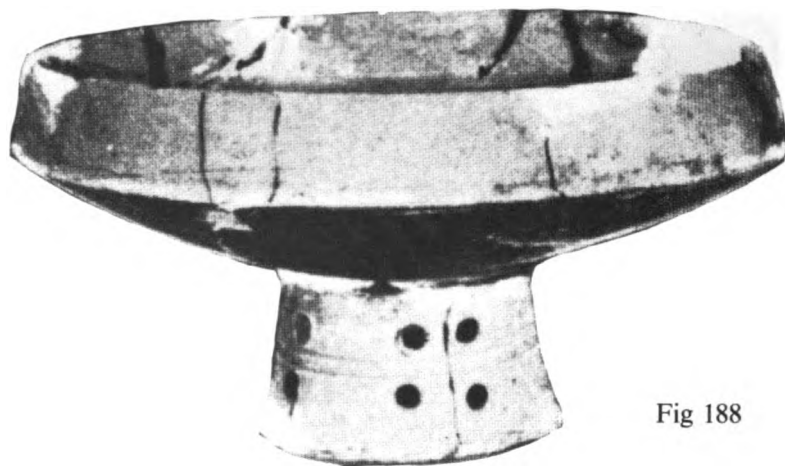


Fig 188

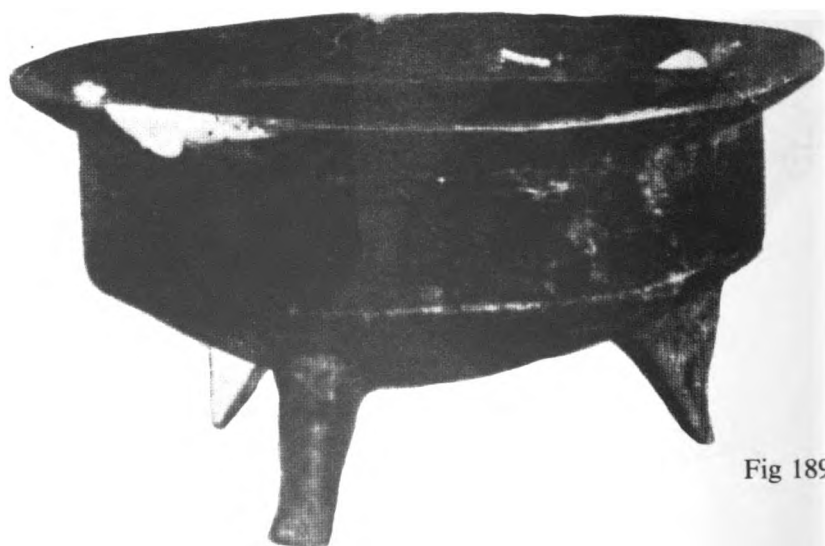


Fig 189

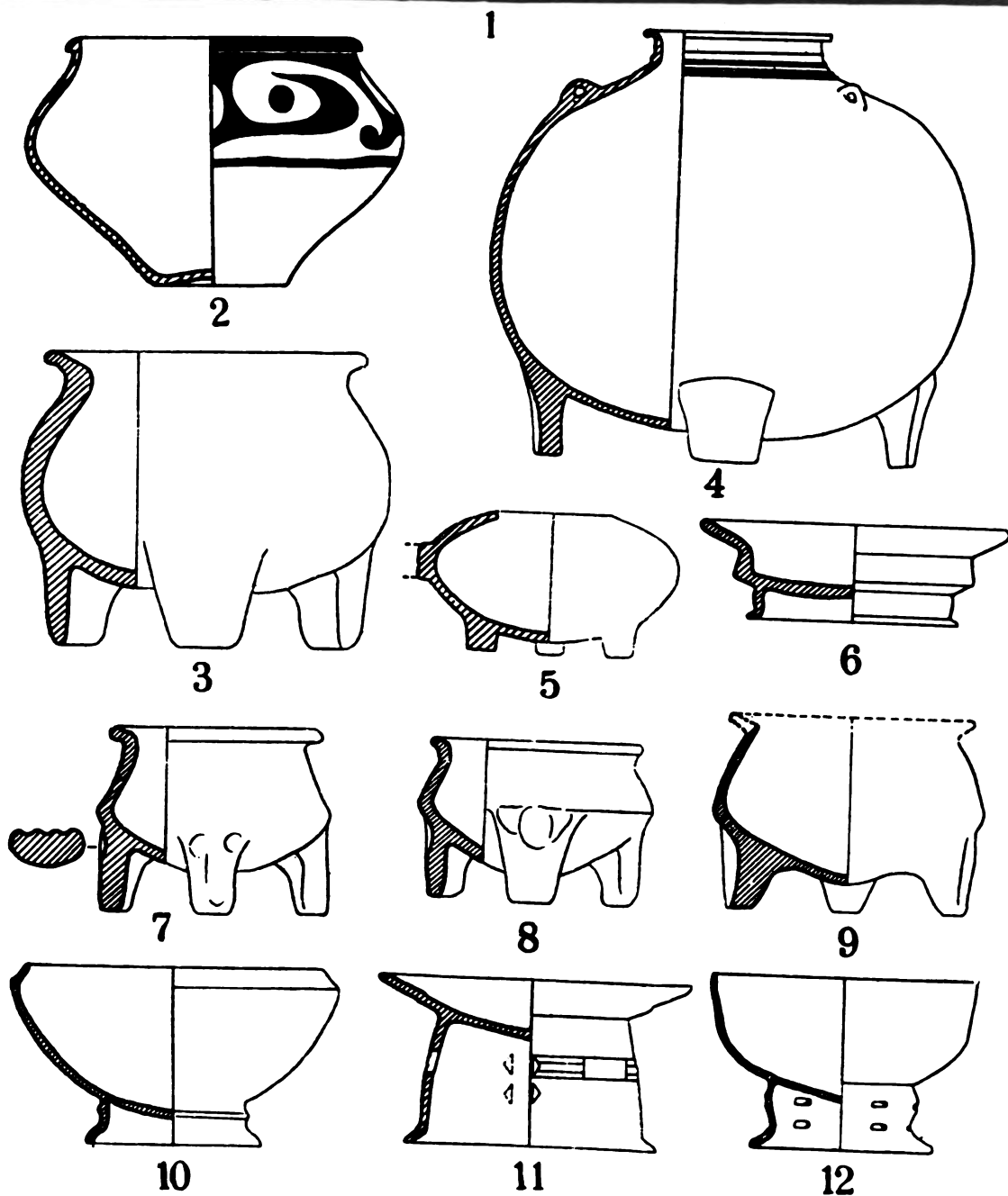


Fig 190

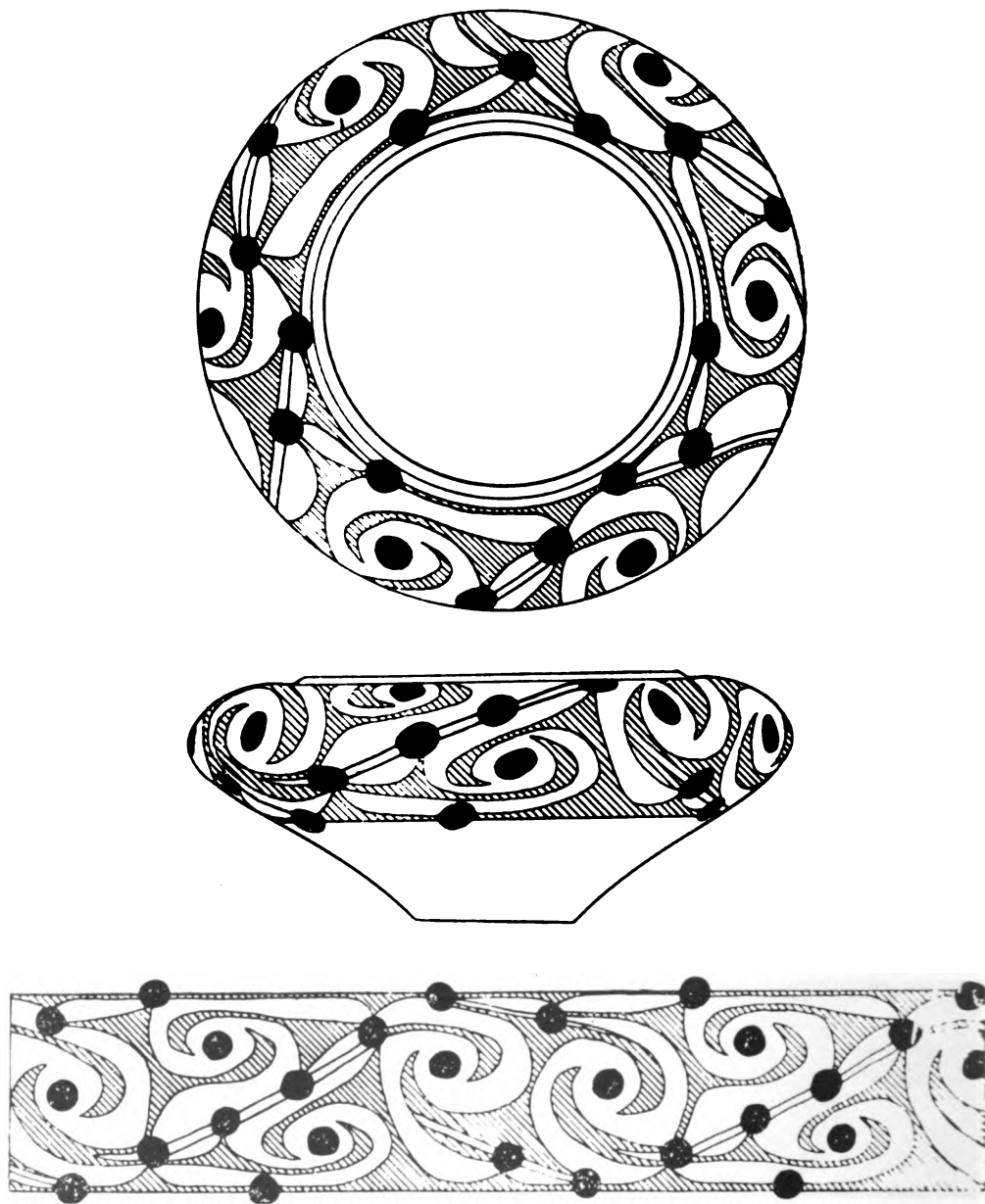


Fig 191

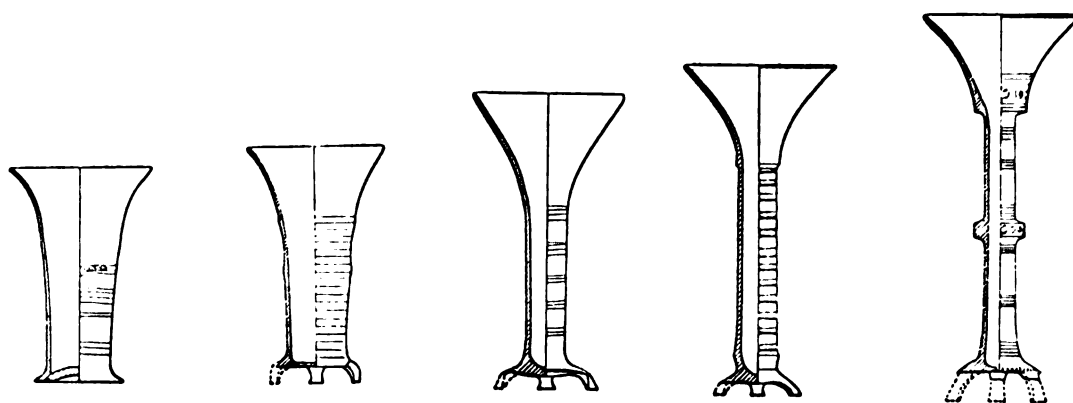
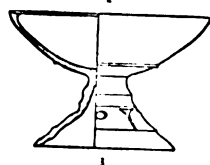
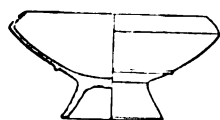
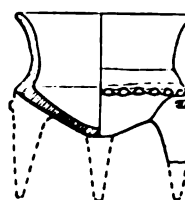
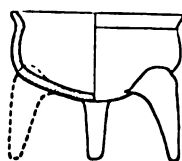
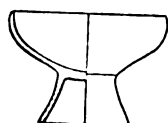


Fig 192



0 5 10 cm

Fig 193

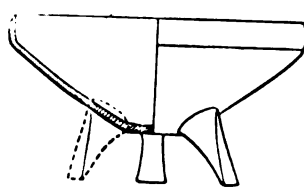


Fig 194

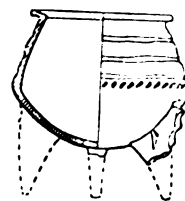


Fig 195



Fig 196

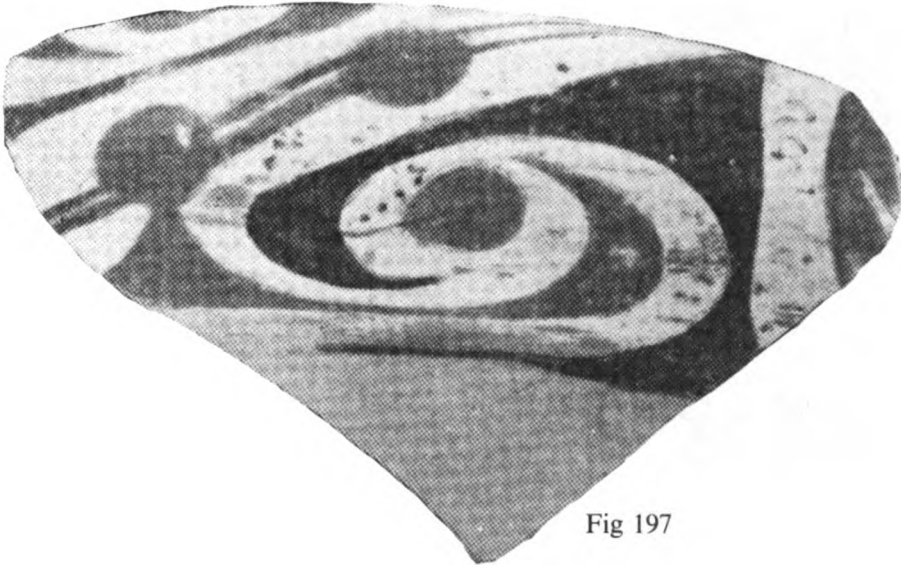


Fig 197

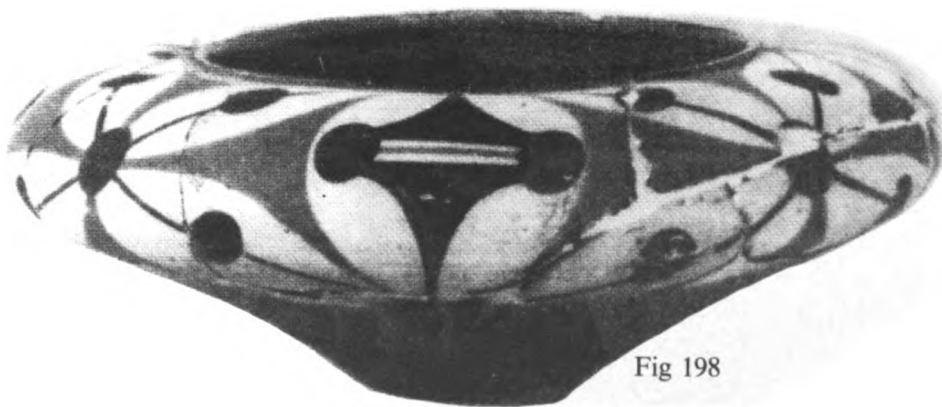


Fig 198

Plate 80



Fig 199

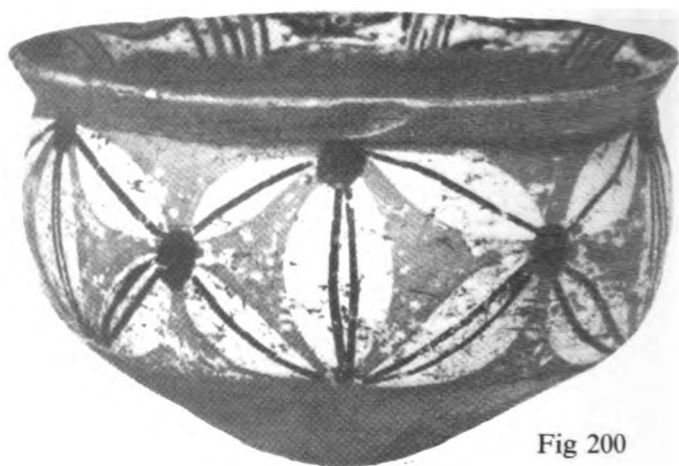


Fig 200



Fig 201

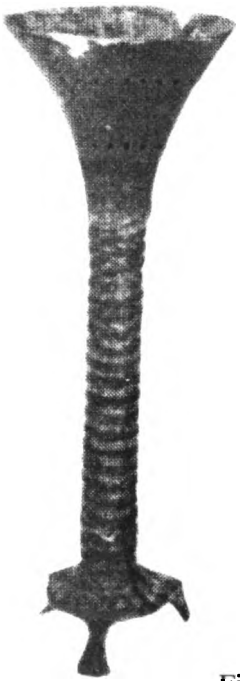


Fig 202

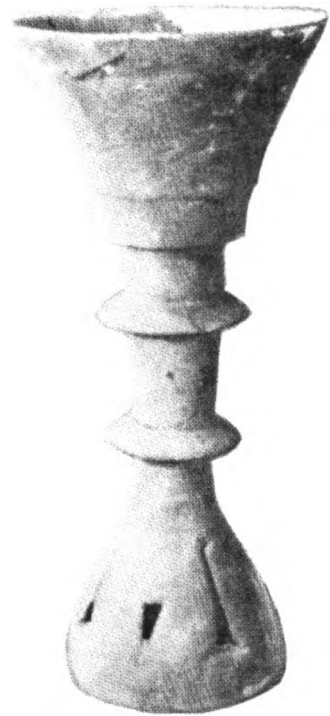
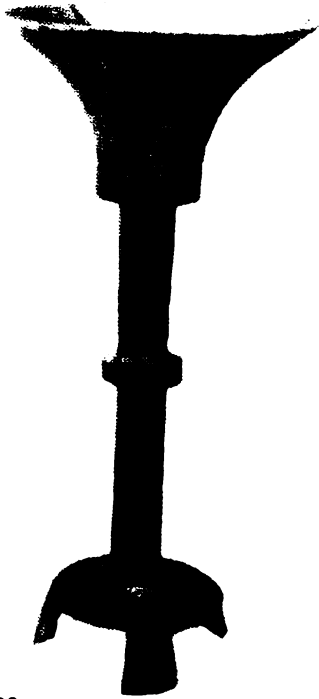
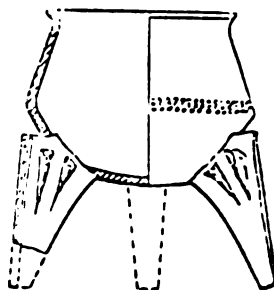
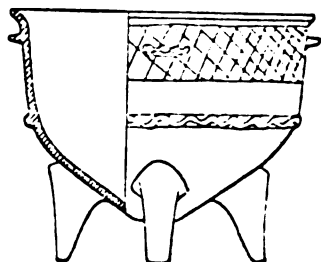
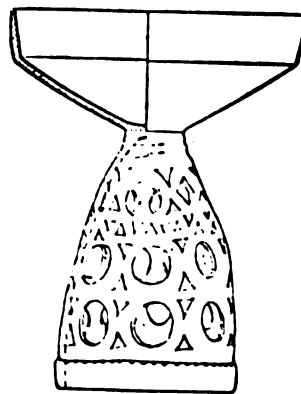
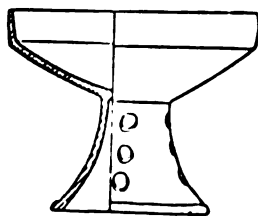
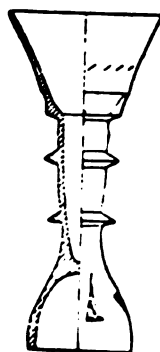
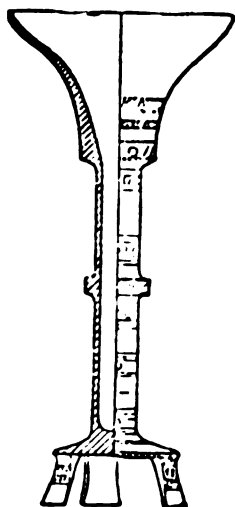


Fig 204



Fig 203





a



b

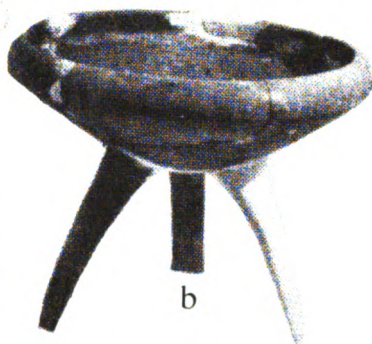


c

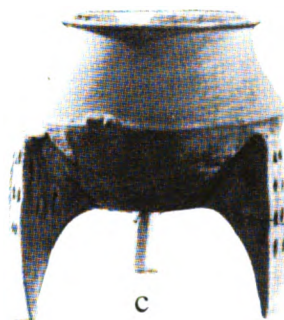
Fig 206



a



b



c

Fig 207



a



b



c

Fig 208



Fig 209



Fig 210



Fig 211



Fig 212



Fig 213



Fig 214



Fig 215



Fig 216



Fig 217

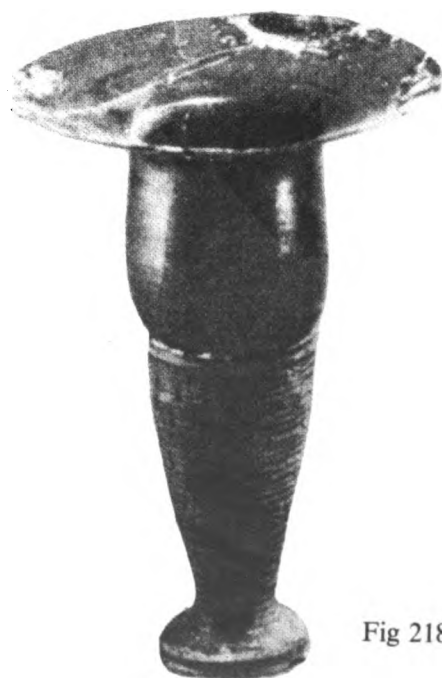


Fig 218



Fig 219



Fig 220



Fig 221



Fig 222



Fig 223



Fig 224



Fig 225



Fig 226

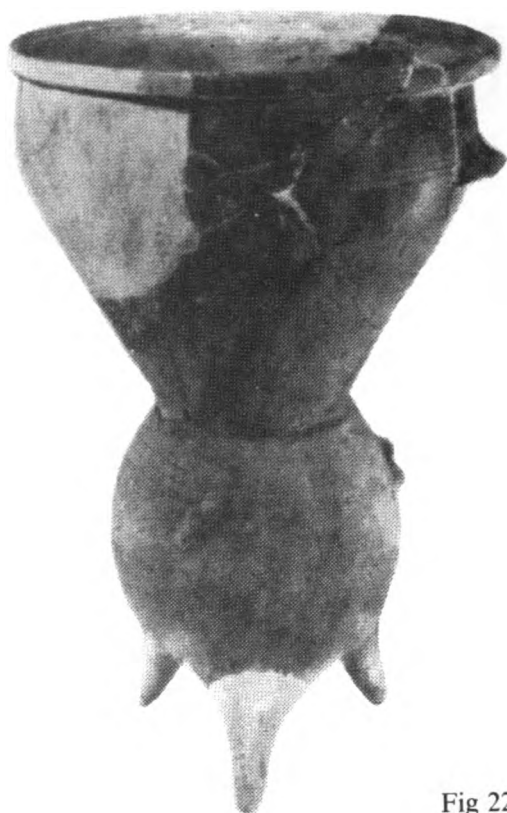


Fig 227



Fig 228



Fig 229



Fig 230



Fig 231



Fig 232



Fig 233



Fig 234



Fig 235

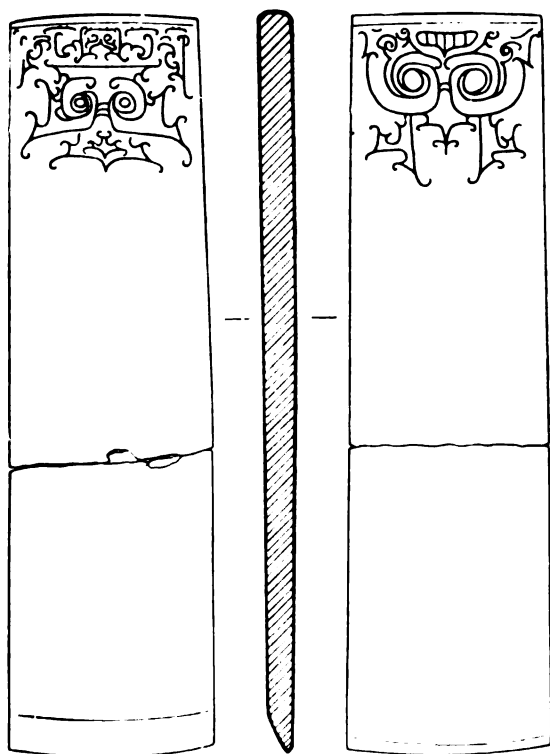


Fig 236

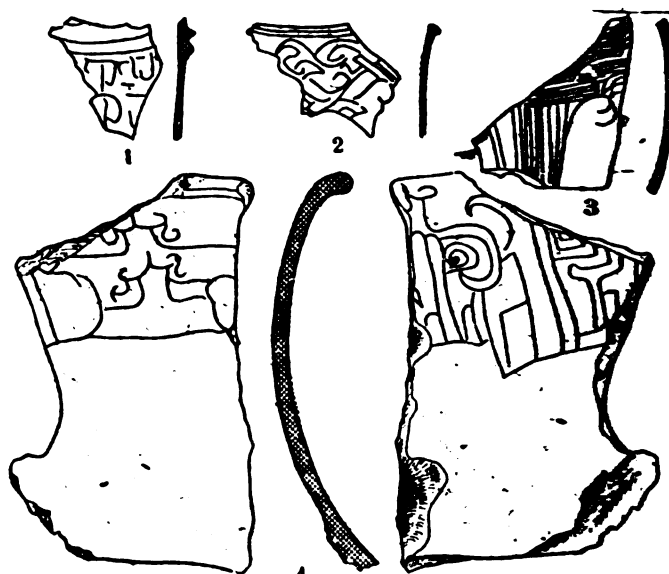


Fig 237



Fig 238

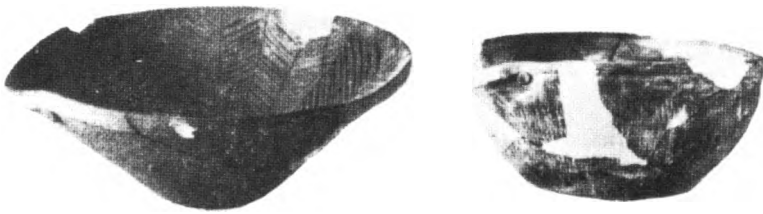


Fig 239

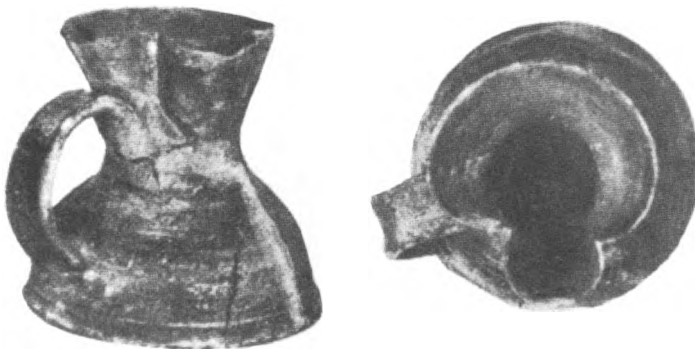


Fig 240

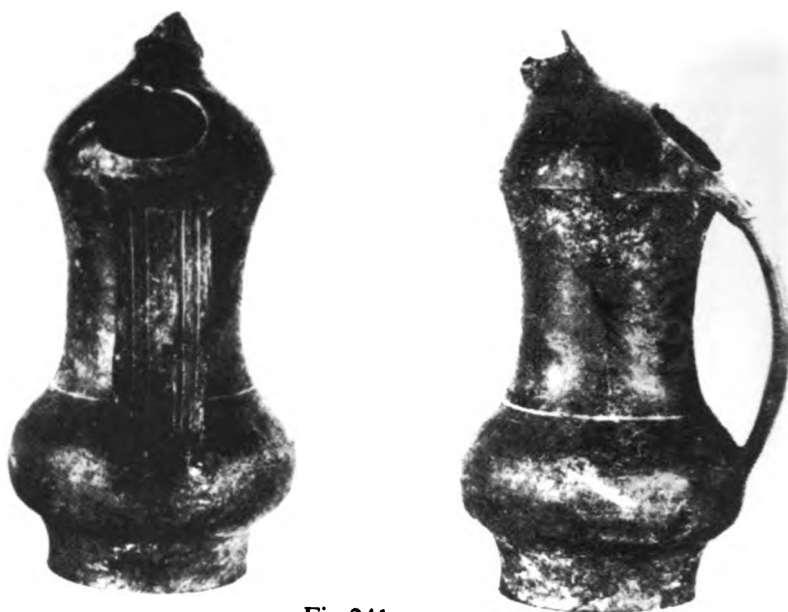


Fig 241



Fig 242



Fig 243



Fig 244

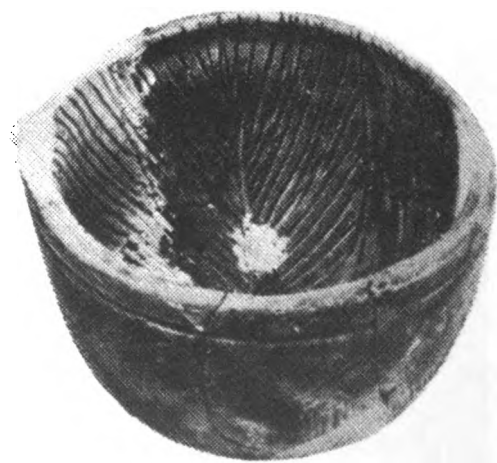


Fig 245



Fig 246



Fig 247



Fig 248



Fig 249



Fig 250

BADA SHANREN'S METHODS OF INSCRIBING DATES ON HIS WORKS

by
Wang Fangyu
(*Translated by Arnold Chang*)

The artist Bada Shanren (Pa-ta Shan-jen)[1] has traditionally been referred to as Zhu Da (Chu Ta) [2] in many Chinese and Western sources. Although there is no doubt that the artist was a member of the Ning [3] lineage of the Ming royal family and that he was surnamed Zhu, there is some question as to his formal given name. It was a common practice among prominent families of the time to select names for their consecutive generations from lists of characters either made up by the head of the family or, in some cases, bestowed by the Emperor himself. In the case of the Ming royal families, the Emperor issued different characters for each lineage which were to be employed, according to generation, as the first character of each given name.²⁾ The second character of the given name was to be chosen from characters with the radicals of metal (*jin*), [4] wood (*mu*), [5] water (*shui*), [6] fire (*huo*), [7] or earth (*tu*) [8] in consecutive order by each generation. At present it is uncertain to which generation Bada Shanren belonged and consequently it is impossible to state categorically what his formal given name was.³⁾ However, it can be stated with certainty that his formal given name was not Zhu Da.

Bada Shanren was a learned man, skilled at both calligraphy and painting. He excelled at writing cursive script in an individualistic style in which the forms of his characters are not always easy to distinguish. Similarly in his poetry he often made obscure allusions that are difficult to understand. He was born at the end of the Ming Dynasty and lived into the beginning of the Qing Dynasty, during a period when the Han people were under the domination of outsiders. Additionally, since he was a descendent of the Ming royal family but lived in the forefront of oppression, his deep-rooted sense of patriotism was rendered idle as he lacked the wherewithal to aid his country or protect his home. He thereupon feigned madness, pretended to be dumb, and exhibited strange and eccentric behavior.

Even during his own lifetime, Bada Shanren had already become a legendary figure. Aside from his poems, calligraphy, and a few examples of personal correspondence, however, he left behind very scanty material regarding his life. In addition, he did not associate with the prominent officials, eminent personages, famous scholars, salt merchants, or businessmen of his time, so we can find very little reliable information about him in the writings of his contemporaries. Upon his death no epitaph was written.⁴⁾ Although his contemporaries left behind few records, since Bada Shanren was a legendary

personality, there are many anecdotes and unconfirmed reports concerning his life. Official individuals have put forth many doubtful ideas based on conjecture, thus further obscuring the facts. In recent years there have been several careful studies, one of which brought to light a portrait of Bada Shanren by Huang Anping [9] that includes inscriptions in Bada Shanren's own hand. Also, according to the *Qing Yun Pu Zhi*, [10] Bada Shanren was identified as the Zhu Daoling [11] who built the Qing Yun Pu Taoist monastery in Nanchang, [12] which has recently been converted into the Exhibition Hall of Bada Shanren's Calligraphy and Painting.) Others have unearthed his grave, hoping to find some reliable information. However, after the gravesite was located and excavated it was found unexpectedly to contain nothing. The grave was too short to have held a body and possibly was only a tomb containing his personal effects. All attempts to discover the real grave have been unsuccessful.

For more than twenty years the author has gathered together a great deal of material concerning Bada Shanren. Of primary importance are his own works. The material may be grouped into four types:

1. Original paintings and calligraphy.
2. Photographs or printed reproductions of original works.
3. Recorded poetry, prose, and correspondence by the artist.)
4. Catalogs and other writings by contemporaries and later generations concerning his life, including colophons on his calligraphy and paintings.

If we collect all this material together, compare, and study it, we can gain some insight into the life and works of Bada Shanren.

Before the age of sixty, Bada Shanren's courtesy names were numerous. The great majority of the works produced between the ages of sixty and eighty bear the four character signature "Bada Shanren," although occasionally the signatures "Shi De," [13] "He Yuan," [14] and others do appear. The earliest example of a dated work signed "Bada Shanren" that the author has seen is dated Kangxi [15] twenty-fourth year, *yi chou*, 1685, when the artist was sixty *sui*. [16] (Pls. 1-2). There is also an example of calligraphy entitled '*Zhen Shuai Ming*,' [17] dated *yi chou*, *xia yue*. [18] ("Summer, 1685") (Pl. 3). As for works signed 'Bada Shanren' and dated before 1685, I have seen only spurious examples and no authentic pieces. There is evidence, however, that the four characters 'Bada Shanren' were used as a name prior to 1685. An album of flowers and birds in the collection of Chen Wenxi, [19] dated 1684, bears a seal reading 'Bada Shanren' (Contag and Wang, p. 107, 14). Additionally there are two versions of a composition of a dog, signed 'Bada Shanren' and dated 1684.) Although the authenticity of both examples is doubtful, the fact that the two paintings are identical in format and inscription indicates that there may have been an original from which these two copies were made. Therefore, the signature 'Bada Shanren' may have been used in 1684.

There are only nine extant dated works from the period before the artist signed the name "Bada Shanren". In each case the method of dating conforms to the standard system of celestial stems and earthly branches (*jia, yi, bing, ding, . . . zi, chou, yin, mao . . .*), with the exception of one album leaf depicting fish dated 1693 which is inscribed with the stem character *gui* only. This will be discussed in the latter part of this article. Otherwise, there are no complications involved in calculating the dates.

The last dated work ascribed to Bada Shanren is dated *yi you*, mid-Autumn, Kangxi forty-fourth year (1705), when the artist was eighty *sui*. (Pl. 4). Bada Shanren's date of death has now been proven by Wang Shiqing to be *yi you* mid-Autumn (1705).⁸) There are four works, one calligraphy and three paintings, all in the format of large hanging scrolls, that carry the date *yi you*, Autumn. No extant works are dated later than that.

The artist signed the name "Bada Shanren" for a total of twenty-one years. Within this twenty-one year period there are no extant works bearing dates corresponding to 1687 and 1704.⁹) It is possible that Bada Shanren did not produce any paintings in 1704 (*jia shen*) because he was commemorating the fall of the Ming Dynasty in 1644 (*jia shen*). The table below lists by date all of the works by Bada Shanren known to the author:

Known Dated Works by Bada Shanren

year	age	calligraphy	paintings	total
before signing "Bada Shanren"				
1659 ji hai	34	1	1	2
1666 bing wu	41	0	1	1
1671 xin hai	46	1	0	1
1674 jia yin	49	1	0	1
1678 wu wu	53	1	0	1
1681 xin you	56	0	1	1
1683 gui hai	58	0	1	1
1684 jia zi	59	1	0	1
after signing "Bada Shanren"				
1685 yi chou	60	2	0	2
1686 bing yin	61	0	1	1
1688 wu chen	63	1	0	1
1689 ji si	64	0	6	6
1690 geng wu	65	7	13	20
1691 xin wei	66	1	4	5
1692 ren shen	67	1	8	9
1693 gui you	68	5	1	6
1694 jia xu	69	2	11	13
1695 yi hai	70	0	4	4
1696 bing zi	71	1	3	4
1697 ding chou	72	2	2	4
1698 wu yin	73	3	1	4
1699 ji mao	74	6	4	10
1700 geng chen	75	4	6	10
1701 xin si	76	1	1	2
1702 ren wu	77	4	6	10
1703 gui wei	78	1	4	5
1705 yi you	80	4	5	9
				Total 134

The material in the above table is limited to those works which I have seen in the original, in photographic form, or in a photographically reproduced form. I have not included material based solely on written records or catalog entries. The number of pieces refers only to dated works. In the case of albums, only those leaves which are actually dated have been counted because in some cases an

album may be made up of leaves with different dates. Undated leaves are excluded.

This material has been gathered together for the purpose of comparison and study. Before we have studied this material in depth we cannot make strict judgments concerning authenticity. We have excluded all works which have indications that they are obvious fakes.

The chief concern of this article is the methods employed by Bada Shanren in inscribing the dates on his works after the age of sixty, since there is no confusion with works dated prior to the age of sixty.

In general Chinese calligraphers and painters throughout history have used the system of stems and branches in dating their works (*jia zi, yi chou*, etc.). However, the *jia, yi, bing, ding . . . zi, chou, yin, mao . . .* system is only one way of writing the stems and branches. In Chinese cosmology there are two other methods of recording the years—the method employed in the “*Shi Tian*” [20] chapter of the *Er Ya*, [21] and the method appearing in the “*Li Shu*” [22] section of *Shi Ji*. [23] The two systems are compared below:

Ten Celestial Stems

<u>Er Ya</u> 爾雅		<u>Shi Ji</u> 史記	
<u>jia</u> 甲	<u>yanfeng</u> 闕逢	<u>yanfeng</u> 焉逢	
<u>yi</u> 乙	<u>zanmeng</u> 旃蒙	<u>duanmeng</u> 端蒙	
<u>bing</u> 丙	<u>rouzhao</u> 柔兆	<u>youzhao</u> 游兆	
<u>ding</u> 丁	<u>qiangyu</u> 強圉	<u>qiangwu</u> 彊梧	
<u>wu</u> 戊	<u>zhuyong</u> 著雍	<u>tuwei</u> 徒維	
<u>ji</u> 己	<u>tuwei</u> 徒維	<u>zhuli</u> 祝犁	
<u>geng</u> 庚	<u>shangzhang</u> 上章	<u>shangheng</u> 商橫	
<u>xin</u> 辛	<u>chongguang</u> 重光	<u>zhaoyang</u> 昭陽	
<u>ren</u> 壬	<u>xuanyi</u> 玄弋	<u>heng'ai</u> 橫艾	
<u>gui</u> 癸	<u>zhaoyang</u> 昭陽	<u>shangzhang</u> 尚章	

Er Ya 爾雅Shi Ji 史記

<u>zi</u>	<u>kundun</u>	困頓	same
<u>chou</u>	<u>chifenruo</u>	赤奮若	same
<u>yin</u>	<u>nietige</u>	攝提格	same
<u>mao</u>	<u>shanyan</u>	單閼	same
<u>chen</u>	<u>zhixu</u>	執徐	same
<u>si</u>	<u>dehuangluo</u>	大荒落	same
<u>wu</u>	<u>dunzang</u>	敦牂	same
<u>wei</u>	<u>xieqia</u>	協洽	same
<u>shen</u>	<u>tuntan</u>	涒灘	same
<u>you</u>	<u>zuo'e</u>	作噩	same
<u>xu</u>	<u>yanmao</u>	閼茂	<u>yanmao</u> 淹茂
<u>hai</u>	<u>dayuanxian</u>	大淵獻	same

For the most part, Bada Shanren employed the *jia, yi, bing, ding . . . zi, chou, yin, mao . . .* method of dating his works, but he also used the *Er Ya* “*Shi Tian*” method. He is not known to have used the *Shi Ji* methods. He also employed numerous variations of these basic methods, which can be summarized as follows:

1. **Er Ya stems and branches.** The album “*Yushi Tu*” [24] (“Fish and Rock”) is inscribed as follows: “*Zhanmeng Dayuanxian zhi chongyang ri xie yi shi er fu*” [25] (“I painted these twelve leaves on the ninth day of the ninth month of the year *zhanmeng dayuanxian*” The year is equivalent to *yi hai*, 1695, and the album was therefore painted at the age of seventy *sui* (Pl. 5). Another album of eight leaves depicting fish, rocks, flowers, and birds was produced in the Summer of the same year and is dated in the same way. This album was formerly in the collection of the Japanese novelist Mushanokōji Saneatsu [26] and is presently housed in the Tokyo Art Museum.

2. **The jia, yi, bing, ding . . . method, in which only the celestial stem is written, minus the earthly branch.** This method was popular in Bada Shanren's time and he was not the only artist to employ it. There is a painting entitled "*Xian Ji Tu*," [27] painted in the year *geng wu* (formerly in the collection of C. C. Wang. The painting is known to the author through photographs.) which is inscribed "*Geng chongyang she shi*" [28] ("Depicted on the ninth day of the ninth month of the year *geng*."). It has been suggested that in this inscription the *geng* character is actually the two characters *geng* and *wu* combined but this is not likely. A painting of two birds and a rock is dated in the same manner. It is inscribed "*Geng qiu she shi*." [29] "painted in the Fall of the year *geng*."¹⁰) There is also an album leaf depicting a catfish entitled "*Nianyu Tu*" [30] ("catfish") inscribed "*Xin chun she shi*" [31] ("Depicted in the spring of the year *xin*"). This is the equivalent of the year *xin wei*, 1691, when the artist was sixty-six *sui*. (Pl. 6). There are two versions of this composition with identical inscriptions. (Pl. 7). There is also an album leaf, presently in a Japanese collection, depicting a fish and inscribed "*Gui ba yue yuan ri lu hua*" [32] ("Painted by Lü on the day when the moon was full in the eight month of the year *gui*"). This painting was created in the year *gui hai*, 1683, when the artist was fifty-eight *sui*. It is not signed "Bada Shanren".

3. **Er Ya celestial stems minus the earthly branches.** The "*Yushi Tu* [33] ("Fish and Rock") hanging scroll in the Crawford collection is inscribed with two large cursive characters *rouzhao* [34]¹¹) written in the upper righthand corner. These two characters have been misread as *nan bei* [35] (South and North). *Rouzhao* is equivalent to *bing*. The style of the brushwork and the calligraphic inscription match those of the other works dating to *bing zi* 1696, and painted at the age of seventy-one *sui*. Therefore this work can be safely dated 1696¹²) (Pl. 8).

4. **Er Ya celestial stems with jia, yi, bing, ding . . . annotation.** The album leaf "Youyu Tu" [36] ("Swimming Fish") is inscribed "*Gui zhaoyang zhi dong ri xie*" [37] ("Written in the winter of the year *gui zhaoyang*"). *Zhaoyang* is equivalent to *gui* in the *Er Ya* system and *xin* in the *Shi Ji* system. The character *gui* is added to clarify that *Zhaoyang* means *gui*. This painting was painted in the year *gui wei*, 1703, at the age of seventy-eight *sui*. (Pl. 9). Another example of this type of dating is an album leaf of calligraphy in a Japanese private collection. The work is dated "*Xin chongguang zhi yue zai xieqia*." [38] *Chongguang* is equivalent to *xin* in the *Er Ya* system and *xieqia* is equivalent to *wei*. The artist wrote both *xin* and *chongguang* to clarify his meaning. The work was done in the year *xin wei*, 1691, when the artist was sixty-six *sui*. (Pl. 10).

5. **A combination of Er Ya celestial stems with names of constellations borrowed to stand for the earthly branches.** A fan of calligraphy, "*Jing Ji Ming Chuang*," [39] is inscribed "*Zhaoyang daliang zhi shi yue*" [40] ("Tenth month of the year *Zhaoyang daliang*"). *Zhaoyang* is equivalent to *gui*. In the *Er Ya*, *daliang* means *mao* [41] (the eighteenth sign of the Chinese zodiac corresponding to the constellation Pleiades). According to the twenty-eight Chinese zodiacal constel-

lations *mao* (Pleiades) has the sun as its corresponding element and chicken as its corresponding animal. *You* is another word for chicken. Therefore *zhaoyang daliang* is *gui you*, 1693, when Bada Shanren was sixty-eight *sui*. The style of the calligraphy is compatible with such a date (Pl. 11). There is also an album of landscapes in which one of the leaves is likewise inscribed “*Zhaoyang daliang zhi xia*” [42] (“Summer of *zhaoyang daliang*”). Another leaf of the album, of calligraphy after Li Yong (Beihai), [43] bears the date *gui you* and clearly corroborates our conclusion. This album has been published in Japan. The author has reproductions and photographs, although the bibliographical notes have not yet been made available.

6. **One character from the Er Ya or Shi Ji celestial stems combined with a sign from the Chinese zodiacal constellations serving as an earthly branch.** The album of calligraphy “*Song Li Yuan Gui Pan Gu Xu*” [44] (“Saying Farewell to Li Yuan on his return to Pan Gu”), is inscribed “*Qiang xingji shi yue ershiwu ri*” [45] (“Twenty-fifth day of the tenth month of the year *qiang xingji*”). The *Er Ya qiangyu* [46] and the *Shi Ji qiangwu* [47] are both equivalent to *ding* (the two *qiang* characters are interchangeable). It says also in the *Er Ya* that *xingji* stands for *dou niu gong* [48] (The region of the Big Dipper and Altair), the second character of which (“*niu*”) means ox. The ox is also represented by *chou*. Therefore, *qiang xingji* is *ding chou*, 1697, when the artist was seventy-two *sui*. The calligraphy, signature, and seals all corroborate this date. (Pls. 12–13).

7. **The standard jia zi, yi chou . . . stem and branch combinations but using strange characters which are difficult to decipher.** I have seen five examples of this type from the year *yi you*, 1705, when Bada Shanren was eighty *sui*. The character *you* is written in two rare ancient forms (See [49] and [50]). In a handscroll of calligraphy, entitled “*Zui Weng Yin*” [51] (“Intoxicated old man hums verse”), the character *you* is written as [49], (Pl. 14), and in a work of calligraphy in the form of a fan entitled “*Xi Yu Ting Ji*” [52] (“Record of the Pavilion for Taking Delight in the Rain”), (Pls. 15–16), the character *you* is written as [50]. The forms of the *you* character used in the five examples are either [49] or [50].

Zeng Xi’s [53] colophon at the end of the “*Zui Weng Yin*” handscroll mistakes *yi you* for *yi hai*. Zhu Xingzhai [54] repeated this error.”) There are two bits of evidence which prove conclusively that the graphs [49] and [50] stand for *you*:

1. The inscription on the work of calligraphy “*Xi Yu Ting Ji*” (“Record of the Pavilion for Taking Delight in the Rain”) is “*yi you run qian si yue ji wang* [55] (“Sixteenth day of the former fourth month of the leap year *yi you*”). It is clear that the year *yi you* to which the artist referred must have been a leap year. The year 1705, *yi you*, was indeed a leap year with an intercalendary month inserted as the second fourth month. This is in accord with the artist’s inscription.
2. An example of Bada Shanren’s calligraphy in the form of a fan with the first line as “*Tu hua dang nian ai feng huang*” [56] contains a line which reads “*Bai hua*

kai luo jiu ying shang" [57] ("A hundred flowers bloom and wilt, the wine vessels are filled to the brim"). The *you* at the right portion of the character *jiu* [58] (wine) is written as [59], which is related to the form of the character [49]. (Pl. 17). Additionally, the character *jiu* in "*Zhen Shuai Ming*" (Pl. 3), is similarly written. Therefore [49] and [50] are definitely *you*, not *hai*, as Zeng and Zhu mistakenly concluded.

NOTES

¹⁾ This article was originally published in Chinese without illustrations. See: 'Bada Shanren Shuhua Jinian Fangfa' [60] in *Zhongyang Ribao*, [61] November 8 and 9, 1968. Since then more material has been collected and more knowledge has been acquired. Although the basic structure of the original article remains intact, some new information has been added, some minor points have been revised, and the number of paintings and calligraphy has been increased.

²⁾ The twenty characters given to the Ning lineage are as follows:

pan	dian	jin	chen	gong	duo	mou	tong	yi	zhong
zong	tian	zhi	shu	kuo	zuo	zhe	xiang	qin	zhong [62]

³⁾ Three different names in three different generations have been suggested. They belong to the tong, yi, and zhong [63] generations. See: Wang Fangyu, 'Bada Shanren di Mingzi' [64] "Bada Shanren's Real Name," in *Zhonghua Ribao* [65] ("China Daily,") August 28, 1979.

⁴⁾ Yushi Laoren, [66] Chen Lang, [67] states in his *Du Hua Ji Lue* [68] that Feng Ban [69] wrote his epitaph, but careful study reveals that this was not the case.

⁵⁾ The contents of the *Qing Yun Pu Zhi*, [70] since they exist only in a later edition, are highly doubtful. Further research has proven that it is not possible that Bada Shanren and Zhu Daolang were the same person. See: Wu Tung, (YeYe), 'Lun Hu Yitang shibian Ji qi dui Bada Shanren di ying xiang,' [71] 'Discussion of the Hu Yitang Incident and its Influence on Bada Shanren,' In *Dalu Zazhi* [72] ("The Continent Magazine,") Vol. 54, No. 6 (June 15, 1977).

⁶⁾ Professor Herbert Franke of Munich University in "Zur Biographie des Pa-ta shan-jen", *Asiatica*, Festschrift für Friedrich Welle (Leipzig, 1954), p. 127; Victoria Contag, *Chinese Masters of the 17th Century*, p. 18, touches on the importance of the poems which Bada Shanren inscribed on his paintings. His comments are completely in accord with my own ideas. For further discussions of Bada Shanren's poems see: Wang Fangyu, 'Bada Shanren Shi Shi jie' [73] ("On the Poems of Chu Ta,") *Gugong Jikan*, [74] ("The National Palace Museum Quarterly,") Vol. XI No. 1 (Autumn, 1976); and "Chu Ta's 'Shih Shuo Hsin Yu' [75] Poems," *Renditions*, No. 6 (Spring, 1976).

⁷⁾ One version is recorded in Osvald Sirén, *Chinese Painting* Volume, VII, page 322. The other version is in a private collection in Hong Kong.

⁸⁾ See: Wang Shiqing, [76] 'Qiu Feng Wen Ji, [77] *Wenwu*, [78] Vol. 12, 1969, which discusses Shi Tao's poetry and prose.

⁹⁾ See: Osvald Sirén, *Chinese Painting*, Vol. VII, page 323. Sirén lists one painting ascribed to Bada Shanren entitled 'Strange Cliff and Stumpy Trees,' housed in the Kyoto Museum (Sokokuji), [79] which was supposedly signed at the age of 80 (1704). This is an error. The painting is not inscribed with either date or age. According to personal correspondence with Professor James Cahill the mistake was made by a Japanese interpreter who incorrectly read the characters 'Bada Shanren' as 'Ba Shi Su' [80] (eighty years old).

¹⁰⁾ Reproduced in *Bada Shanren Album*, Jiangxi People's Printing House, 1979, page 14.

¹¹⁾ See: Vito Giacalone, *Chu Ta-Selected Paintings and Calligraphy* (1973 exhibition catalogue) entry No. 7, in which he states: "Lippe interprets the cipher above the signature as 'North and South.' It probably refers to the poem 'In the east and west, north and south—they all find their pleasure; yet I am not like a fish!' Wang Fangyu interprets the calligraphy to read in accordance with '1696.' I am inclined to date the painting stylistically later and closer to *Two Eagles* of 1702. The Taoist interpretation of the cipher would be more relevant to the Taoist theory of Chu Ta's last years." This is absolute nonsense.

¹²⁾ See the explanation by Ashwin Lippe in *Chinese Painting and Calligraphy in the Collection of John M. Crawford, Jr.*, page 155. See also: *Da Feng Tang Ming Ji*, [81] ("Masterpieces of Chinese Paintings in the Collection of Da Feng Hall,") Vol. 3, 1955, Japan and related publications.

¹³⁾ See: Zhu Xingzhai, 'Bada Shanren Zui Weng Yin Juan' [82] (Intoxicated old man hums verse by Bada Shanren); *Re Feng* [83] ("Hot Wind") No. 23, Aug. 16, 1954.

CHINESE CHARACTERS

1. 八 大 山 人
2. 朱 韋
3. 寧 金
4. 木
5. 水
6. 火
7. 土
8. 黃 安 平
9. 青 雲 譜 志
10. 朱 道 朗
11. 南 昌
12. 拾 得 (十 得)
13. 何 園
14. 康 熙
15. 歲 真 率 銘
16. 夏 月
17. 陳 文 希
18. 釋 天
19. 爾 雅
20. 曆 書
21. 史 記
22. 魚 石 圖
23. 旃 蒙 大 淵 獻 之
24. 重 陽 日 寫 一
25. 十 二 幅
26. 武 者 小 路 實 篤
27. 鷗 雞 園
28. 庚 重 陽 涉 事
29. 庚 秋 涉 事
30. 鯢 魚 圖
31. 辛 春 涉 事
32. 癸 八 月 圓 日 廬
33. 畫
34. 魚 石 圖
35. 柔 兆
36. 南 北
37. 游 魚 圖
38. 癸 昭 陽 之 冬 日
39. 寫
40. 辛 重 光 之 月 在
41. 協 洽
42. 靜 几 明 窗
43. 昭 陽 大 梁 之 十
44. 月
45. 昂
46. 昭 陽 大 梁 之 夏
47. 李 邕 (北 海)
48. 送 李 愿 歸 盤 谷
49. 序
50. 彊 星 紀
51. 彊 圍
52. 彊 梧
53. 斗 牛 宮
54. 系
55. 系
56. 醉 翁 吟
57. 意 雨 亭 記
58. 曾 熙

54. 朱省齋
55. 乙酉閏前四月
既望
56. 圖畫當年愛鳳
凰
57. 百花開落酒盈
觴
58. 酒
59. 毛
60. 八大山人書畫
紀年方法
61. 中央日報
62. 磐奠觀宸拱
多謀統議中
總添枝庶濶
作哲向親衷
63. 統議中
64. 八大山人的名
子
65. 中華日報
66. 玉獅老人
67. 陳烺
68. 讀畫輯略
69. 馮班
70. 青雲譜志
71. 吳同(葉葉)論胡
亦堂事變及
其對八大山
人的影響
72. 大陸雜誌
73. 八大山人詩試
解
74. 故宮季刊
75. 世說新語
76. 汪世清
77. 虬峯文集
78. 文物
79. 相國寺
80. 八十歲
81. 大風堂名蹟
82. 八大山人醉翁
吟卷
83. 熱風
84. 孫隲甫
85. 八大山人書畫
扇集
86. 乙酉秋中
87. 米澤嘉圃
88. 鶴田武良
89. 八大山人·揚州
八怪
90. 蘇州博物館藏
畫
91. 八大山人書畫
集
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93. 朝花
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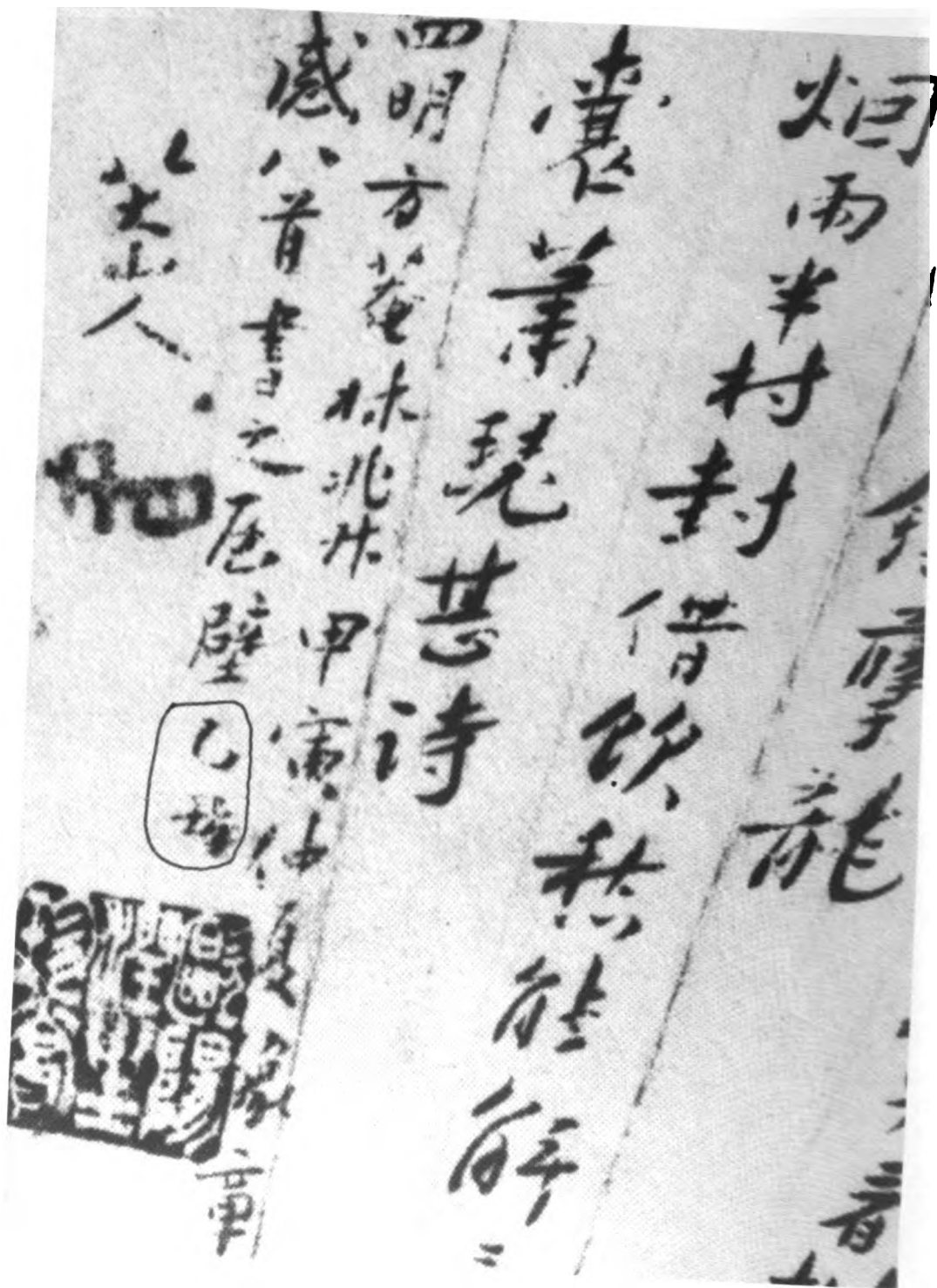
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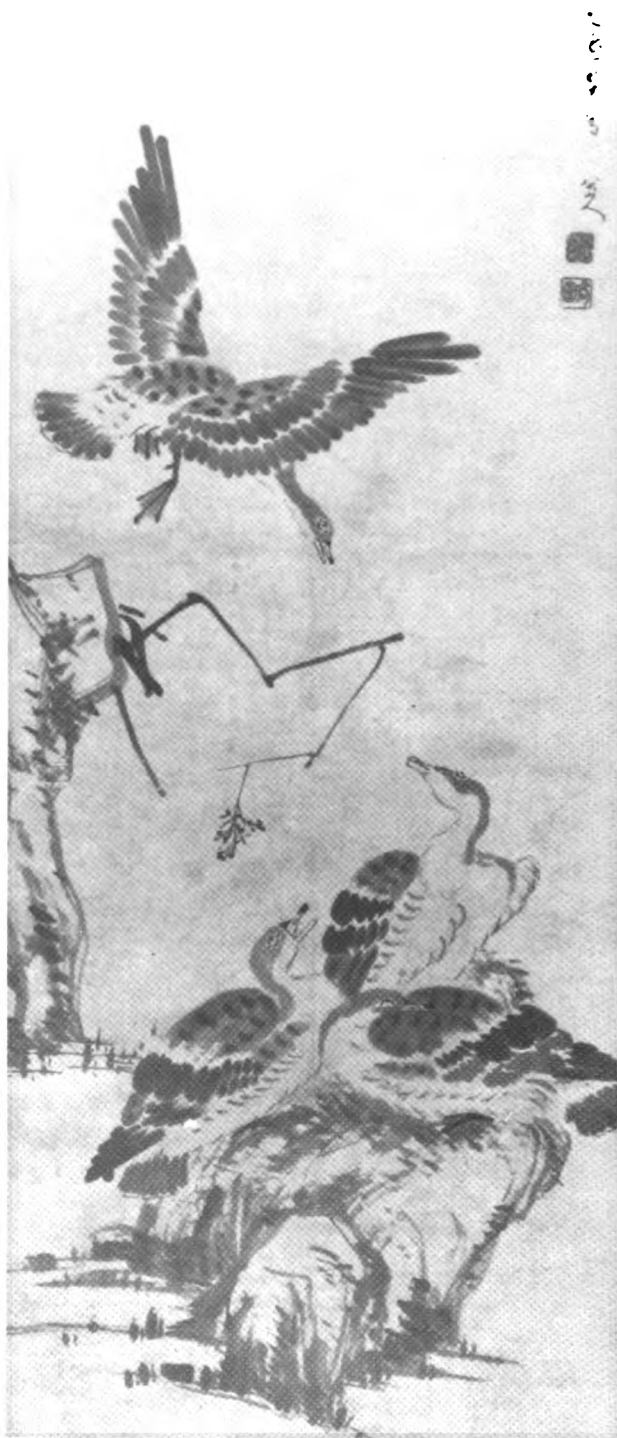
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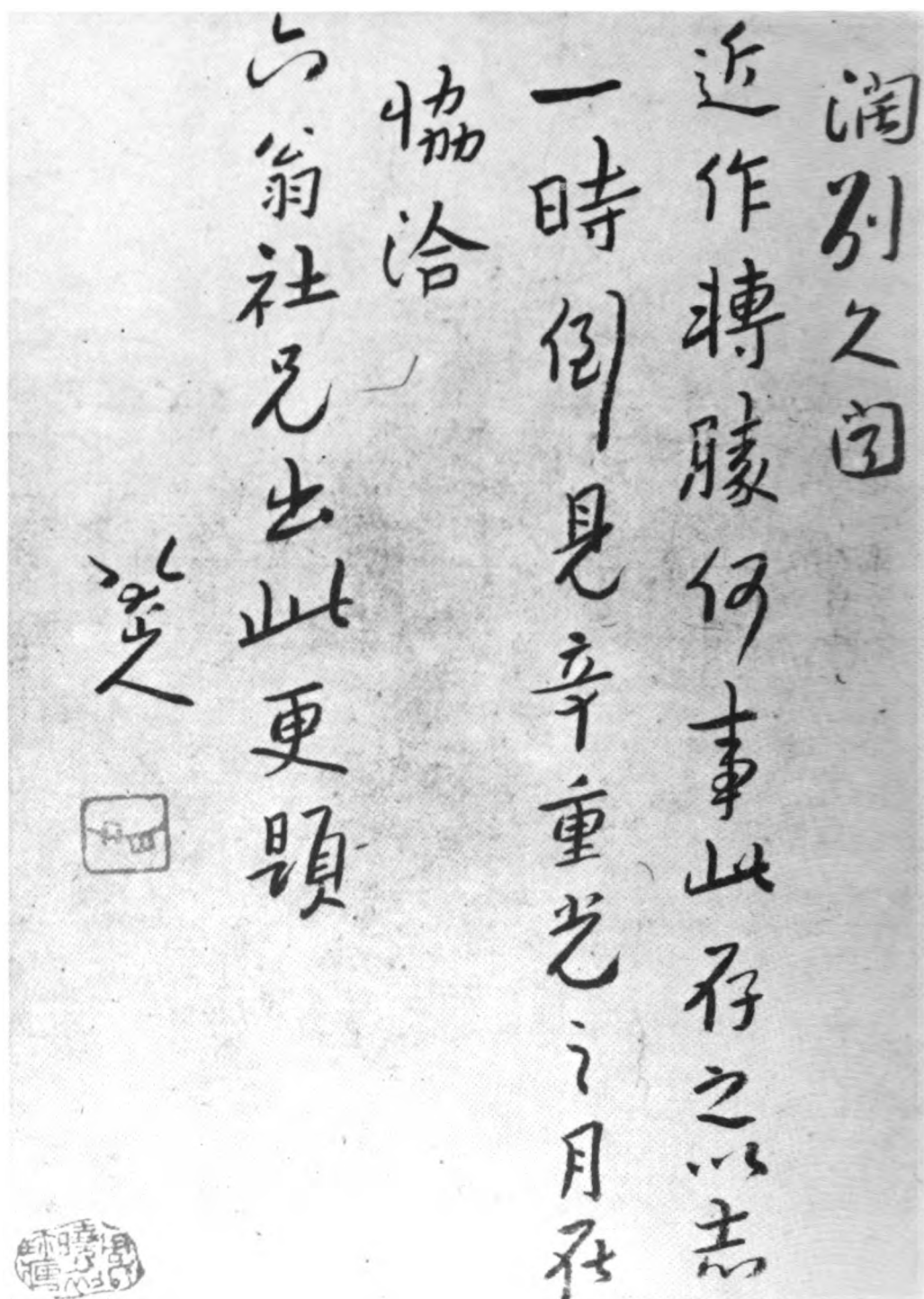


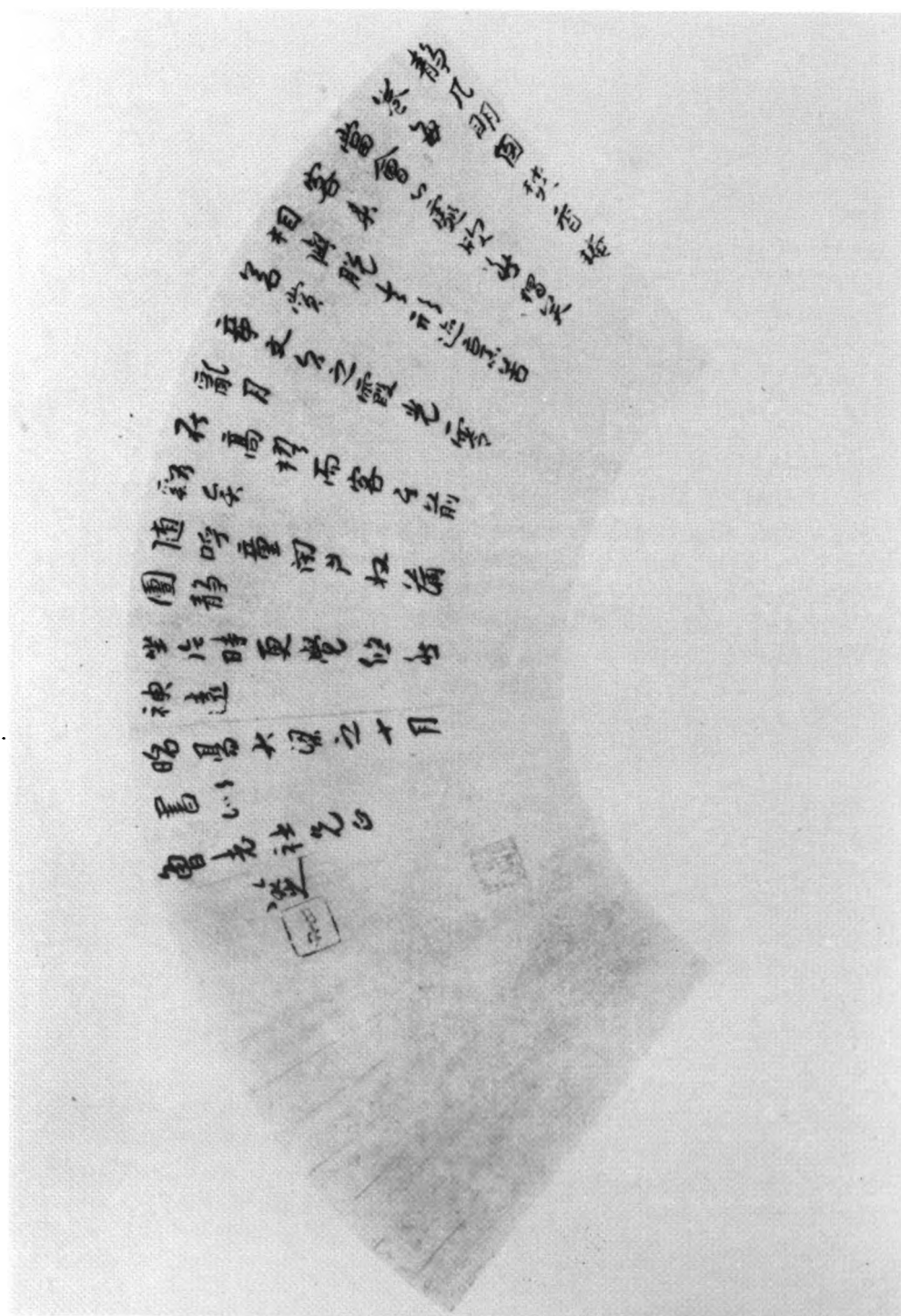
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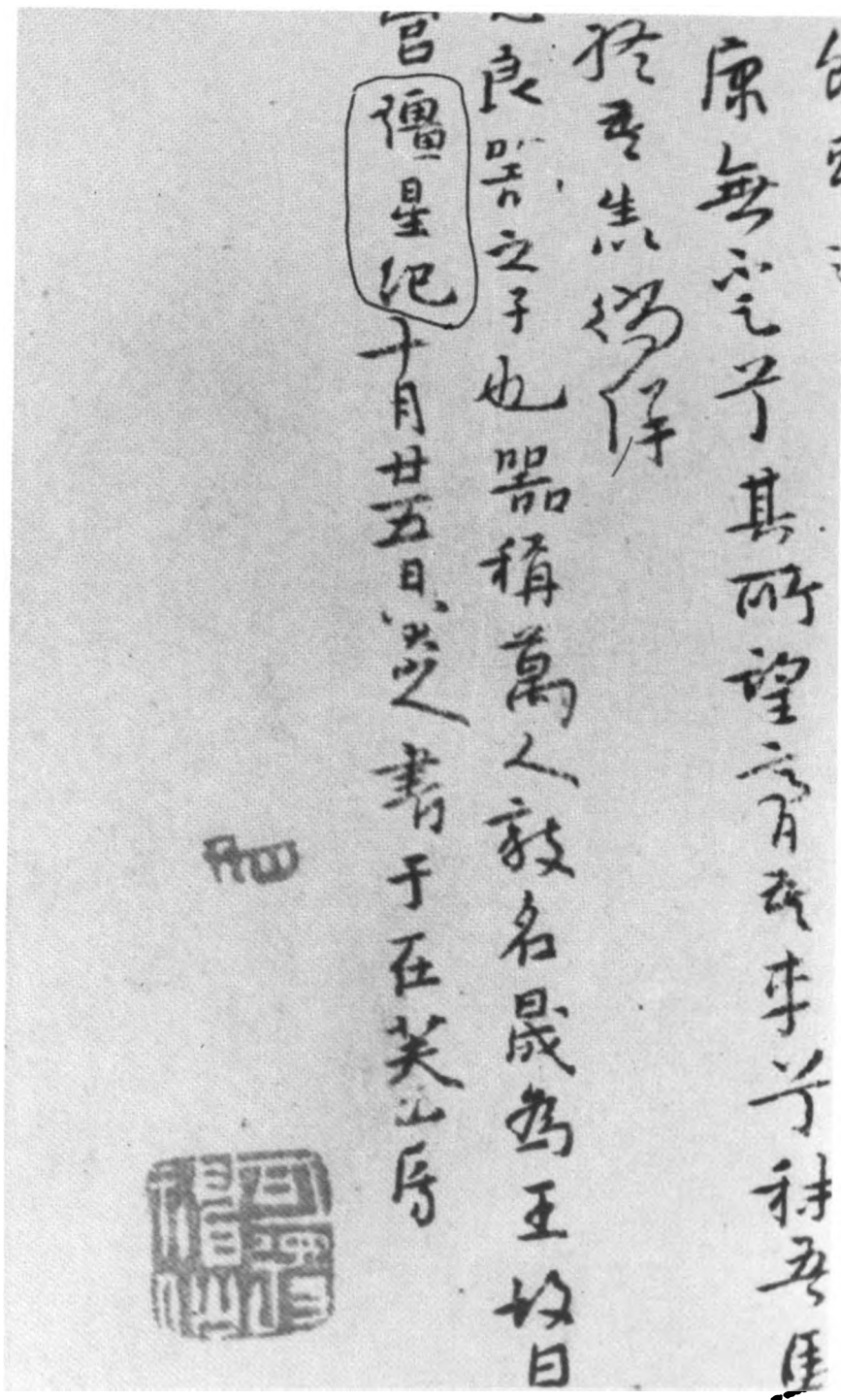






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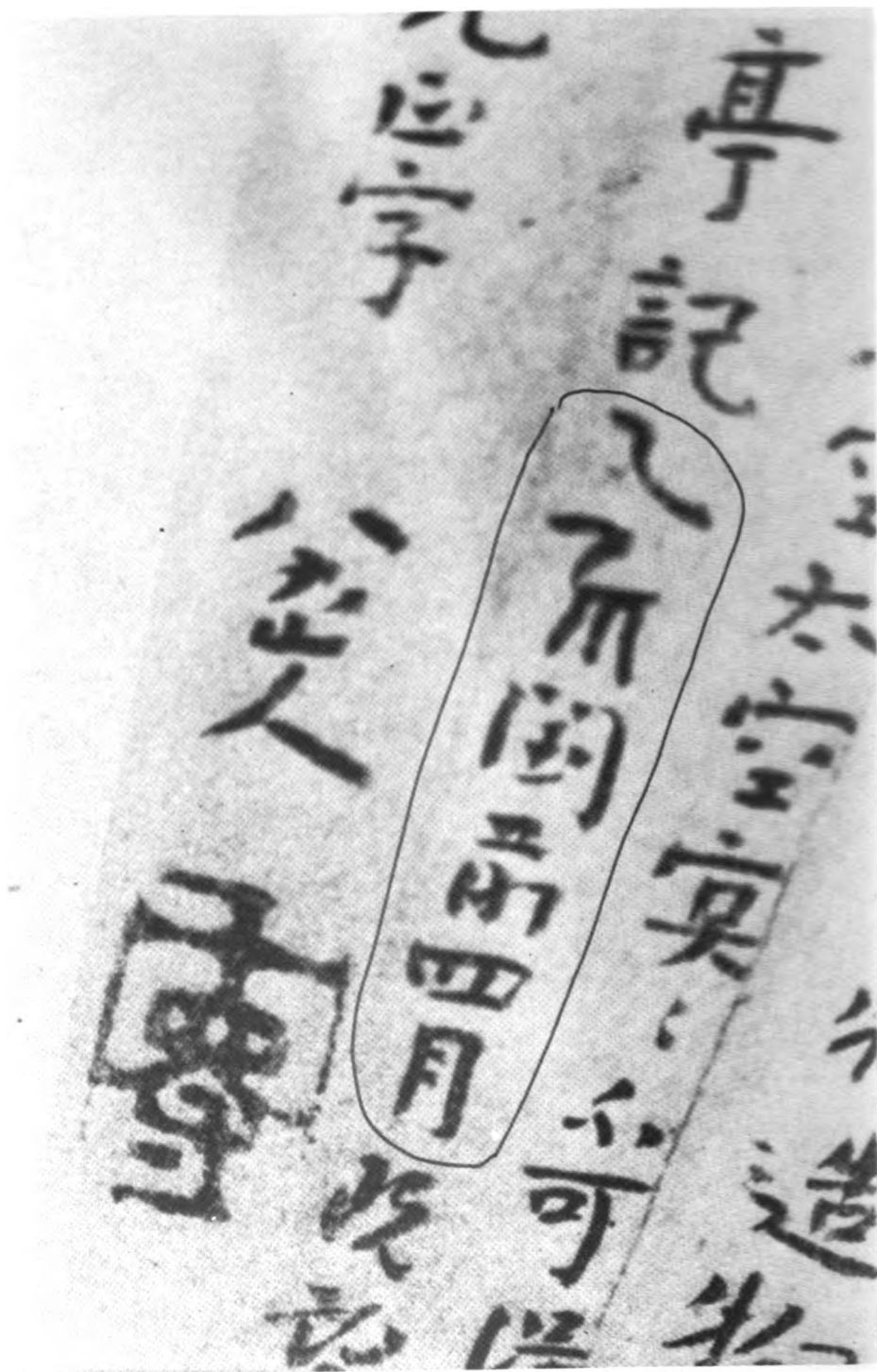


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文書



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通雅訓虛
降百花園
語盈揚如
月長子青
年長風間
白龍一四日
心林明世
敬

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